

RAW SEQUENCE LISTING
ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/724,126

Source: O/PE

Date Processed by STIC: 12/7/2000

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) **INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,**
- 2) **TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY**

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: patin30help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW:

Checker Version 3.0

The Checker Version 3.0 application is a state-of the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 – 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.

Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO). Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

Checker Version 3.0 can be down loaded from the USPTO website at the following address:
<http://www.uspto.gov/web/offices/pac/checker>

Raw Sequence Listing Error Summary

ERROR DETECTED SUGGESTED CORRECTION

SERIAL NUMBER: 09/724,126 #4

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

1 Wrapped Nucleic The number/text at the end of each line "wrapped" down to the next line.
This may occur if your file was retrieved in a word processor after creating it.
Please adjust your right margin to .3, as this will prevent "wrapping".

2 Wrapped Aminos The amino acid-number/text at the end of each line "wrapped" down to the next line.
This may occur if your file was retrieved in a word processor after creating it.
Please adjust your right margin to .3, as this will prevent "wrapping".

3 Incorrect Line Length The rules require that a line not exceed 72 characters in length. This includes spaces.

4 Misaligned Amino Acid Numbering The numbering under each 5th amino acid is misaligned. This may be caused by the use of tabs between the numbering. It is recommended to delete any tabs and use spacing between the numbers.

5 Non-ASCII This file was not saved in ASCII (DOS) text, as required by the Sequence Rules.
Please ensure your subsequent submission is saved in ASCII text so that it can be processed.

6 Variable Length Sequence(s) _____ contain n's or Xaa's which represented more than one residue.
As per the rules, each n or Xaa can only represent a single residue.
Please present the maximum number of each residue having variable length and indicate in the (ix) feature section that some may be missing.

7 PatentIn ver. 2.0 "bug" A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequence(s) _____. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies primarily to the mandatory <220>-<223> sections for Artificial or Unknown sequences.

8 Skipped Sequences (OLD RULES) Sequence(s) _____ missing. If intentional, please use the following format for each skipped sequence:
(i) INFORMATION FOR SEQ ID NO:X:
(ii) SEQUENCE CHARACTERISTICS:(Do not insert any headings under "SEQUENCE CHARACTERISTICS")
(iii) SEQUENCE DESCRIPTION:SEQ ID NO:X:
This sequence is intentionally skipped

Please also adjust the "(iii) NUMBER OF SEQUENCES:" response to include the skipped sequence(s).

9 Skipped Sequences (NEW RULES) Sequence(s) _____ missing. If intentional, please use the following format for each skipped sequence.
<210> sequence id number
<400> sequence id number
000

10 Use of n's or Xaa's (NEW RULES) Use of n's and/or Xaa's have been detected in the Sequence Listing.
Use of <220> to <223> is MANDATORY if n's or Xaa's are present.
In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.

11 Use of <213>Organism (NEW RULES) Sequence(s) _____ are missing this mandatory field or its response.

12 Use of <220>Feature (NEW RULES) Sequence(s) _____ are missing the <220>Feature and associated headings.
Use of <220> to <223> is MANDATORY if <213>ORGANISM is "Artificial" or "Unknown"
Please explain source of genetic material in <220> to <223> section.
(See "Federal Register," 6/01/98, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of new Rules)

13 PatentIn ver. 2.0 "bug" Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other means to copy file to floppy disk.

OIPE

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/724,126

DATE: 12/07/2000
TIME: 07:57:43

Input Set : A:\35966aseq.txt
Output Set: N:\CRF3\12072000\I724126.raw

Does Not Comply
Corrected Diskette Needed

4 <110> APPLICANT: Han, Hui-Quan
5 Kwak, Keith
7 <120> TITLE OF INVENTION: Human E3 Alpha Ubiquitin Ligase
9 <130> FILE REFERENCE: 01017/35966
OK 11 <140> CURRENT APPLICATION NUMBER: US/09/724,126
12 <141> CURRENT FILING DATE: 2000-11-28
14 <150> PRIOR APPLICATION NUMBER: US 60/187,911
19 <151> PRIOR FILING DATE: 1999-03-08
17 <160> NUMBER OF SEQ ID NOS: 29
19 <170> SOFTWARE: PatentIn Ver. 2.0

ERRORED SEQUENCES

508 <210> SEQ ID NO: 2
509 <211> LENGTH: 1749
510 <212> TYPE: PRI
511 <213> ORGANISM: Homo sapiens
513 <400> SEQUENCE: 2
514 Met Ala Asp Glu Glu Ala Glu; Gly Thr Glu Arg Met Glu Ile Ser Ala
515 1 5 10 15
517 Glu Leu Pro Glu Thr Pro Glu Arg Leu Ala Ser Trp Trp Asp Gln Gln
518 20 25 30
520 Val Asp Phe Tyr Thr Ala Phe Leu His His Leu Ala Gln Leu Val Pro
521 35 40 45
523 Glu Ile Tyr Phe Ala Glu Met Asp Pro Asp Leu Glu Lys Gln Glu Glu
524 50 55 60
526 Ser Val Gln Met Ser Ile Phe Thr Pro Leu Glu Trp Tyr Leu Phe Gly
527 65 70 75 80
529 Glu Asp Pro Asp Ile Cys Leu Glu Lys Leu Lys His Ser Gly Ala Phe
530 85 90 95
532 Gln Leu Cys Gly Arg Val Phe Lys Ser Gly Glu Thr Thr Tyr Ser Cys
533 100 105 110
535 Arg Asp Cys Ala Ile Asp Pro Thr Cys Val Leu Cys Met Asp Cys Phe
536 115 120 125
538 Gln Asp Ser Val His Lys Asn His Arg Tyr Lys Met His Thr Ser Thr
539 130 135 140
541 Gly Gly Gly Phe Cys Asp Cys Gly Asp Thr Glu Ala Trp Lys Thr Gly
542 145 150 155 160
544 Pro Phe Cys Val Asn His Glu Pro Gly Arg Ala Gly Thr Ile Lys Glu
545 165 170 175
547 Asn Ser Arg Cys Pro Leu Asn Glu Glu Val Ile Val Gln Ala Arg Lys
548 180 185 190
550 Ile Phe Pro Ser Val Ile Lys Tyr Val Val Glu Met Thr Ile Trp Glu
551 195 200 205
553 Glu Glu Lys Glu Ile Pro Pro Glu Leu Gln Ile Arg Glu Lys Asn Glu
554 210 215 220

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Input Set : A:\35966aseq.txt
Output Set: N:\CRF3\12072000\1724126.raw

556 Arg Tyr Tyr Cys Val Leu Phe Asn Asp Glu His His Ser Tyr Asp His
557 225 230 235 240
559 Val Ile Tyr Ser Leu Gln Arg Ala Leu Asp Cys Glu Leu Ala Glu Ala
560 215 250 255
562 Gln Leu His Thr Thr Ala Ile Asp Lys Glu Gly Arg Arg Ala Val Lys
563 260 265 270
565 Ala Gly Ala Tyr Ala Ala Cys Gln Glu Ala Lys Glu Asp Ile Lys Ser
566 275 280 285
568 His Ser Glu Asn Val Ser Gln His Pro Leu His Val Glu Val Leu His
569 290 295 300
571 Ser Glu Ile Met Ala His Gln Lys Phe Ala Leu Arg Leu Gly Ser Trp
572 305 310 315 320
574 Met Asn Lys Ile Met Ser Tyr Ser Ser Asp Phe Arg Gln Ile Phe Cys
575 325 330 335
577 Gln Ala Cys Leu Arg Glu Glu Pro Asp Ser Glu Asn Pro Cys Leu Ile
578 340 345 350
589 Ser Arg Leu Met Leu Trp Asp Ala Lys Leu Tyr Lys Gly Ala Arg Lys
581 355 360 365
583 Ile Leu His Gln Leu Ile Phe Ser Ser Phe Phe Met Glu Met Glu Tyr
584 370 375 380
586 Lys Lys Leu Phe Ala Met Glu Phe Val Lys Tyr Tyr Lys Gln Leu Gln
587 385 390 395 400
589 Lys Glu Tyr Ile Ser Asp Asp His Asp Arg Ser Ile Ser Ile Thr Ala
590 405 410 415
592 Leu Ser Val Gln Met Phe Thr Val Pro Thr Leu Ala Arg His Leu Ile
593 420 425 430
595 Glu Glu Gln Asn Val Ile Ser Val Ile Thr Glu Thr Leu Leu Glu Val
596 435 440 445
598 Leu Pro Glu Tyr Ile Asp Arg Asn Asn Lys Phe Asn Phe Gln Gly Tyr
599 450 455 460
601 Ser Gln Asp Lys Ile Gln Arg Val Tyr Ala Val Ile Cys Asp Leu Lys
602 465 470 475 480
604 Tyr Ile Leu Ile Ser Lys Pro Thr Ile Trp Thr Glu Arg Leu Arg Met
605 485 490 495
607 Gln Phe Leu Gln Ile Phe Arg Ser Phe Leu Lys Ile Leu Thr Cys Met
608 500 505 510
610 Gln Gly Met Gln Glu Ile Arg Arg Gln Val Gly Gln His Ile Glu Val
611 515 520 525
613 Asp Pro Asp Ile Gln Ala Ile Ala Ile Gln Met Gln Leu Lys Asn
614 530 535 540
616 Ile Leu Leu Met Phe Gln Glu Trp Cys Ala Cys Asp Glu Glu Leu Leu
617 545 550 555 560
619 Leu Val Ala Ile Lys Glu Cys His Lys Ala Val Met Arg Cys Ser Thr
620 565 570 575
622 Ser Phe Ile Ser Ser Ser Lys Thr Val Val Gln Ser Cys Gly His Ser
623 580 585 590
625 Leu Glu Thr Lys Ser Tyr Arg Val Ser Glu Asp Leu Val Ser Ile His
626 595 600 605
628 Leu Pro Leu Ser Arg Ile Leu Ala Gly Leu His Val Arg Leu Ser Arg

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| | | | | | | | | | | | | | | | | |
|-----|-----|-----|------|------|-----|-----|-----|-------------|-----|-----|-----|-----|-----|-----|-----|-----|
| 629 | 610 | 615 | 620 | | | | | | | | | | | | | |
| 631 | Ieu | Gly | Ala | Val | Ser | Arg | Leu | His | Glu | Phe | Val | Ser | Phe | Glu | Asp | Phe |
| 632 | 625 | . | 630 | 635 | 640 | | | | | | | | | | | |
| 634 | Gln | Val | Glu | Val | Leu | Val | Glu | Tyr | Pro | Leu | Arg | Cys | Leu | Val | Leu | Val |
| 635 | . | 645 | 650 | 655 | | | | | | | | | | | | |
| 637 | Ala | Gln | Val | Val | Ala | Glu | Met | Irp | Arg | Arg | Asn | Gly | Leu | Ser | Leu | Ile |
| 638 | . | 660 | 665 | 670 | | | | | | | | | | | | |
| 640 | Ser | Gln | Val | Phe | Tyr | Tyr | Gln | Asp | Val | Lys | Cys | Arg | Glu | Glu | Met | Tyr |
| 641 | . | 675 | 680 | 685 | | | | | | | | | | | | |
| 643 | Asp | Lys | Asp | Ile | Ile | Met | Leu | Gln | Ile | Gly | Ala | Ser | Leu | Met | Asp | Pro |
| 644 | . | 690 | 695 | 700 | | | | | | | | | | | | |
| 646 | Asn | Lys | Phe | Leu | Leu | Leu | Val | Leu | Gln | Arg | Tyr | Glu | Leu | Ala | Glu | Ala |
| 647 | 705 | . | 710 | 715 | 720 | | | | | | | | | | | |
| 649 | Phe | Asn | Lys | Thr | Ile | Ser | Thr | Lys | Asp | Gln | Asp | Leu | Ile | Lys | Gln | Tyr |
| 650 | . | 725 | 730 | 735 | | | | | | | | | | | | |
| 652 | Asn | Ihr | Leu | Ile | Glu | Glu | Met | Leu | Gln | Val | Leu | Ile | Tyr | Ile | Val | Gly |
| 653 | . | 740 | 745 | 750 | | | | | | | | | | | | |
| 655 | Glu | Arg | Iyr | Val | Pro | Gly | Val | Gly | Asn | Val | Thr | Lys | Glu | Glu | Val | Ihr |
| 656 | . | 755 | 760 | 765 | | | | | | | | | | | | |
| 658 | Met | Arg | Glu | Ile | Ile | His | Leu | L- <u>u</u> | Cys | Ile | Glu | Pro | Met | Pro | His | Ser |
| 659 | . | 770 | 775 | 780 | | | | | | | | | | | | |
| 661 | Ala | Ile | Ala | Lys | Asn | Leu | Pro | Glu | Asn | Glu | Asn | Asn | Glu | Thr | Gly | Leu |
| 662 | 785 | . | 790 | 795 | 800 | | | | | | | | | | | |
| 664 | Glu | Asn | Val | Ile | Asn | Lys | Val | Ala | Ihr | Phe | Lys | Lys | Pro | Gly | Val | Ser |
| 665 | . | 805 | 810 | 815 | | | | | | | | | | | | |
| 667 | Gly | His | Gly | Val | Tyr | Val | Ile | Lys | Asp | Glu | Ser | Leu | Lys | Asp | Phe | Asn |
| 668 | . | 820 | 825 | 830 | | | | | | | | | | | | |
| 670 | Met | Tyr | Phe | Tyr | His | Iyr | Ser | Lys | Ihr | Gln | His | Ser | Lys | Ala | Glu | His |
| 671 | . | 835 | 840 | 845 | | | | | | | | | | | | |
| 673 | Met | Gln | Lys | Lys | Arg | Arg | Lys | Gln | Glu | Asn | Lys | Asp | Glu | Ala | Leu | Pro |
| 674 | . | 850 | 855 | 860 | | | | | | | | | | | | |
| 676 | Pro | Pro | Pro | Pro | Gln | Phe | Cys | Pro | Ala | Phe | Ser | Lys | Val | Ile | Asn | |
| 677 | 865 | . | 870 | 875 | 880 | | | | | | | | | | | |
| 679 | Leu | Leu | Asn | Cys | Asp | Ile | Met | Met | Tyr | Ile | Leu | Arg | Ihr | Val | Phe | Glu |
| 680 | . | 885 | 890 | 895 | | | | | | | | | | | | |
| 682 | Arg | Ala | Ile | Asp | Ihr | Asp | Ser | Asn | Leu | Irp | Thr | Glu | Gly | Met | Leu | Gln |
| 683 | . | 900 | 905 | 910 | | | | | | | | | | | | |
| 685 | Met | Ala | Phe | His | Ile | Leu | Ala | Leu | Gly | Leu | Leu | Glu | Glu | Lys | Gln | Gln |
| 686 | . | 915 | 920 | 925 | | | | | | | | | | | | |
| 688 | Leu | Gln | Lys | Ala | Irp | Gln | Glu | Glu | Val | Ihr | Phe | Phe | Tyr | His | Lys | |
| 689 | . | 930 | 935 | 940 | | | | | | | | | | | | |
| 691 | Ala | Ser | Arg | Ieu | Gly | Ser | Ser | Ala | Met | Asn | Ile | Gln | Met | Leu | Leu | Glu |
| 692 | 945 | . | 950 | 955 | 960 | | | | | | | | | | | |
| 694 | Lys | Leu | Lys | Gly | Ile | Phe | Gln | Leu | Glu | Gly | Gln | Lys | Asp | Met | Ile | Thr |
| 695 | . | 965 | 970 | 975 | | | | | | | | | | | | |
| 697 | Irp | Ile | Leu | Gln | Met | Phe | Asp | Ihr | Val | Lys | Arg | Leu | Arg | Glu | Lys | Ser |
| 698 | . | 980 | 985 | 990 | | | | | | | | | | | | |
| 700 | Cys | Ieu | Ile | Val | Ala | Ihr | Ihr | Ser | Gly | Ser | Glu | Ser | Ile | Lys | Asn | Asp |
| 701 | . | 995 | 1000 | 1005 | | | | | | | | | | | | |

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/724,126

DATE: 12/07/2000
TIME: 07:57:43

Input Set : A:\35966aseq.txt
Output Set: N:\CRF3\12072000\1724126.raw

703 Glu Ile Thr His Asp Lys Glu Lys Ala Glu Arg Lys Arg Lys Ala Glu
704 1010 1015 1020
706 Ala Ala Asp Leu His Arg Gln Lys Ile Met Ala Gln Met Ser Ala Leu
E--> 707 1025 1025 1030 1035 1040
709 Gln Lys Asn Phe Ile Glu Thr His Lys Leu Met Tyr Asp Asn Thr Ser
710 1045 1050 1055
712 Glu Met Pro Gly Lys Glu Asp Ser Ile Met Glu Glu Glu Ser Thr Pro
713 1060 1065 1070
715 Ala Val Ser Asp Tyr Ser Arg Ile Ala Leu Gly Pro Lys Arg Gly Pro
716 1075 1080 1085
718 Ser Val Thr Glu Lys Glu Val Leu Thr Cys Ile Leu Cys Gln Glu Glu
719 1090 1095 1100
721 Glu Val Lys Ile Glu Asn Asn Ala Met Val Leu Ser Ala Cys Val
E--> 722 105 1105 1110 1115 1120
724 Gln Lys Ser Thr Ala Leu Thr Gln His Arg Gly Lys Pro Ile Glu Leu
725 1125 1130 1135
727 Ser Gly Glu Ala Leu Asp Pro Leu Phe Met Asp Pro Asp Leu Ala Tyr
728 1140 1145 1150
730 Gly Thr Tyr Thr Gly Ser Cys Gly His Val Met His Ala Val Cys Trp
731 1155 1160 1165
733 Gln Lys Tyr Phe Gln Ala Val Gln Leu Ser Ser Gln Gln Arg Ile His
734 1170 1175 1180
736 Val Asp Leu Phe Asp Ile Glu Ser Gly Glu Tyr Ile Cys Pro Leu Cys
E--> 737 185 1185 1190 1195 1200
739 Lys Ser Leu Cys Asn Thr Val Ile Pro Ile Pro Leu Gln Pro Gln
740 1205 1210 1215
742 Lys Ile Asn Ser Gln Asn Ala Asp Ala Leu Ala Gln Leu Leu Thr Leu
743 1220 1225 1230
745 Ala Arg Ile Gln Thr Val Leu Ala Arg Ile Ser Gly Tyr Asn Ile
746 1235 1240 1245
748 Arg Asp Ala L's Gln Gln Asn Pro Ile Pro Phe Phe Asn Gln Gln
749 1250 1255 1260
751 Met Gly Asp Ser Thr Ile Glu Phe His Ser Ile Leu Ser Phe Gly Val
E--> 752 265 1265 1270 1275 1280
754 Glu Ser Ser Ile Ile Ile Ser Asn Ser Ile Lys Glu Met Val Ile Leu
755 1285 1290 1295
757 Phe Ala Thr Thr Ile Tyr Arg Ile Gly Leu Lys Val Pro Pro Asp Glu
758 1300 1305 1310
760 Arg Asp Pro Arg Val Pro Met Leu Thr Trp Ser Thr Cys Ala Phe Thr
761 1315 1320 1325
763 Ile Gln Ala Ile Gln Asn Leu Ile Gly Asp Glu Gly Lys Pro Leu Phe
764 1330 1335 1340
766 Gly Ala Leu Gln Asn Arg Gln His Asn Gly Leu Lys Ala Leu Met Gln
E--> 767 345 1345 1350 1355 1360
769 Phe Ala Val A's Gln Arg Ile Thr Cys Pro Gln Val Leu Ile Gln Lys
770 1365 1370 1375
772 His Leu Val Asn Leu Ser Val Val Leu Pro Asn Ile Lys Ser Glu
773 1380 1385 1390
775 Asp Thr Pro Gys Leu Ile Ser Ile Asp Leu Phe His Val Leu Val Gly

When numbering
the first amino
acid on a line,
begin numbering
from letter of amino
acid, e.g. Ala
1025 [span] /A

Please ensure a space
exists between last
number and first
letter of following
amino acid. Do
not let numbers
"run into" next
amino acid

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/724,126

DATE: 12/07/2000
TIME: 07:57:43

Input Set : A:\35966aseq.txt
Output Set: N:\CRF3\12072000\1724126.raw

776 1395 1400 1405
779 Ala Val Leu Ala Phe Pro Ser Leu Tyr Trp Asp Asp Pro Val Asp Leu
780 1410 1415 1420
781 Cys Pro Ser Ser Val Ser Ser Ser Tyr Asn His Leu Tyr Leu Phe His
E--> 782 425 1430 1435 1440
784 Leu Ile Thr Met Ala His Met Leu Gln Ile Leu Leu Thr Val Asp Thr
785 1445 1450 1455
787 Gly Leu Pro Leu Ala Gln Val Gln Glu Asp Ser Glu Glu Ala His Ser
788 1460 1465 1470
790 Ala Ser Ser Phe Phe Ala Glu Ile Ser Gln Tyr Thr Ser Gly Ser Ile
791 1475 1480 1485
793 Gly Cys Asp Ile Pro Gly Trp Tyr Leu Trp Val Ser Leu Lys Asn Gly
794 1490 1495 1500
796 Ile Thr Pro Tyr Leu Arg Cys Ala Ala Leu Phe Phe His Tyr Leu Leu
E--> 797 505 1510 1515 1520
799 Gly Val Thr Pro Pro Glu Glu Leu His Thr Asn Ser Ala Glu Gly Glu
800 1525 1530 1535
802 Tyr Ser Ala Leu Cys Ser Tyr Leu Ser Leu Pro Thr Asn Leu Phe Leu
803 1540 1545 1550
805 Leu Phe Gln Glu Tyr Trp Asp Thr Val Arg Pro Leu Leu Gln Arg Trp
806 1555 1560 1565
808 Cys Ala Asp Pro Ala Leu Leu Asn Cys Leu Lys Gln Lys Asn Thr Val
809 1570 1575 1580
811 Val Arg Tyr Pro Arg Lys Arg Asn Ser Leu Ile Glu Leu Pro Asp Asp
E--> 812 585 1590 1595 1600
814 Ile Ser Cys Leu Leu Asn Gln Ala Ser His Phe Arg Cys Pro Arg Ser
815 1605 1610 1615
817 Ala Asp Asp Glu Arg Lys His Pro Val Leu Cys Leu Phe Cys Gly Ala
818 1620 1625 1630
820 Ile Leu Cys Ser Gln Asn Ile Cys Cys Gln Glu Ile Val Asn Gly Glu
821 1635 1640 1645
823 Glu Val Gly Ala Cys Ile Phe His Ala Leu His Cys Gly Ala Gly Val
824 1650 1655 1660
826 Cys Ile Phe Leu Lys Ile Arg Gln Cys Arg Val Val Leu Val Glu Cys
E--> 827 665 1670 1675 1680
829 Lys Ala Arg Cys Ala Tyr Pro Ala Pro Tyr Leu Asp Glu Tyr Gly
830 1685 1690 1695
832 Glu Thr Asp Pro Glu Leu Lys Arg Cys Asn Pro Leu His Leu Ser Arg
833 1700 1705 1710
835 Glu Arg Tyr Arg Lys Leu His Leu Val Trp Gln Gln His Cys Ile Ile
836 1715 1720 1725
838 Glu Glu Ile Ala Arg Ser Gln Glu Thr Asn Cys Met Leu Phe Gly Phe
839 1730 1735 1740
841 Asp Trp Gln Leu Leu
E--> 842 745
1335 <210> SEQ ID NO: 4
1336 <211> LENGTH: 1747
1337 <212> TYPE: PRT
1338 <213> ORGANISM: Homo sapiens

PF.8-10

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Input Set : A:\35966aseq.txt
Output Set: N:\CRF3\12072000\1724126.raw

1340 <400> SEQUENCE: 4
 1341 Met Ala Ser Glu Leu Glu Pro Glu Val Gln Ala Ile Asp Arg Ser Leu
 1342 1 . 5 10 15
 1344 Leu Glu Cys Ser Ala Glu Glu Ile Ala Gly Lys Trp Leu Gln Ala Thr
 1345 . 20 25 30
 1347 Asp Leu Thr Arg Glu Val Tyr Gln His Leu Ala His Tyr Val Pro Lys
 1348 . 35 40 45
 1350 Ile Tyr Cys Arg Gly Pro Asn Pro Phe Pro Gln Lys Glu Asp Met Leu
 1351 . 50 55 60
 1353 Ala Gin His Val Leu Leu Gly Pro Met Glu Trp Tyr Leu Cys Gly Glu
 1354 . 65 70 75 80
 1356 Asp Pro Ala Phe Gly Phe Pro Lys Leu Glu Gln Ala Asn Lys Pro Ser
 1357 . 85 90 95
 1359 His Leu Cys Gln Arg Val Phe Iys Val Gly Glu Pro Thr Tyr Ser Cys
 1360 . 100 105 110
 1362 Arg Asp Cys Ala Val Asp Pro Thr Cys Val Leu Cys Met Glu Cys Phe
 1363 . 115 120 125
 1365 Leu Gly Ser Ile His Arg Asp His Arg Tyr Arg Met Thr Thr Ser Gly
 1366 . 130 135 140
 1368 Gly Gly Gly Phe Cys Asp Cys Gln Asp Thr Glu Ala Trp Lys Glu Gly
 1369 . 145 150 155 160
 1371 Pro Tyr Cys Gln Lys His Glu Leu Asn Thr Ser Glu Ile Glu Gln Glu
 1372 . 165 170 175
 1374 Glu Asp Pro Ile Val His Leu Ser Glu Asp Val Ile Ala Arg Thr Tyr
 1375 . 180 185 190
 1377 Asn Ile Phe Ala Ile Thr Phe Arg Tyr Ala Val Glu Ile Leu Thr Trp
 1378 . 195 200 205
 1380 Glu Lys Glu Ser Glu Ile Pro Ala Asp Ile Glu Met Val Glu Lys Ser
 1381 . 210 215 220
 1383 Asp Thr Tyr Tyr Cys Met Leu Phe Asn Asp Glu Val His Thr Tyr Glu
 1384 . 225 230 235 240
 1386 Gln Val Ile Ile Thr Leu Gln Lys Ala Val Asn Cys Thr Gln Lys Glu
 1387 . 245 250 255
 1389 Ala Ile Gly Phe Ala Thr Thr Val Asp Arg Asp Gly Arg Arg Ser Val
 1390 . 260 265 270
 1392 Arg Tyr Gly Asp Phe Gln Tyr Cys Glu Gln Ala Lys Ser Val Ile Val
 1393 . 275 280 285
 1395 Arg Asn Thr Ser Arg Gln Thr Lys Pro Leu Lys Val Gln Val Met His
 1396 . 290 295 300
 1398 Ser Ser Ile Val Ala His Gln Asn Phe Gly Leu Lys Leu Leu Ser Trp
 1399 . 305 310 315 320
 1401 Leu Gly Ser Ile Ile Gly Tyr Ser Asp Gly Leu Arg Arg Ile Leu Cys
 1402 . 325 330 335
 1404 Gln Val Gly Ile Gln Glu Gly Pro Asp Gly Glu Asn Ser Ser Leu Val
 1405 . 340 345 350
 1407 Asp Arg Leu Met Leu Ser Asp Ser Lys Leu Trp Lys Gly Ala Arg Ser
 1408 . 355 360 365
 1410 Val Tyr His Gln Ile Phe Met Ser Ser Leu Leu Met Asp Leu Lys Tyr
 1411 . 370 375 380

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1413 Lys Lys Leu Phe Ala Val Arg Phe Ala Lys Asn Tyr Gln Gln Leu Gln
 1414 385 390 395 400
 1415 Arg Asp Phe Met Glu Asp Asp His Glu Arg Ala Val Ser Val Ile Ala
 1417 405 410 415
 1419 Leu Ser Val Cln Phe Phe Thr Ala Pro Ile Leu Ala Arg Met Leu Ile
 1420 420 425 430
 1422 Thr Glu Glu Asn Leu Met Ser Ile Ile Ile Lys Thr Phe Met Asp His
 1423 435 440 445
 1425 Leu Arg His Arg Asp Ala Gln Gly Arg Phe Gln Phe Glu Arg Ile Ile
 1426 450 455 460
 1428 Ala Leu Gln Ala Phe Lys Phe Arg Arg Val Gln Ser Leu Ile Leu Asp
 1429 465 470 475 480
 1431 Leu Lys Ile Val Leu Ile Ser Lys Pro Ile Glu Trp Ser Asp Glu Leu
 1432 485 490 495
 1434 Arg Gln Lys Phe Leu Glu Gly Phe Asp Ala Phe Leu Glu Leu Leu Lys
 1435 500 505 510
 1437 Cys Met Gln Gly Met Asp Pro Ile Thr Arg Gln Val Gly Gln His Ile
 1438 515 520 525
 1440 Glu Met Glu Pro Gln Trp Glu Ala Ala Phe Thr Leu Gln Met Lys Leu
 1441 530 535 540
 1443 Thr His Val Ile Ser Met Met Gln Asp Trp Cys Ala Ser Asp Glu Lys
 1444 545 550 555 560
 1446 Val Leu Ile Glu Ala Ile Lys Ile Cys Leu Ala Val Leu Met Gln Cys
 1447 565 570 575
 1449 His Gly Gly Ile Ile Asp Gln Glu Gln Pro Ile Thr Leu Ser Ile Cys
 1450 580 585 590
 1452 Gly His Ser Val Gln Ile Ile Arg Ile Cys Val Ser Gln Glu Lys Val
 1453 595 600 605
 1455 Ser Ile His Leu Pro Val Ser Arg Leu Leu Ala Gly Leu His Val Leu
 1456 610 615 620
 1458 Leu Ser Lys Ser Ile Val Ala Ile Lys Phe Pro Glu Leu Leu Pro Leu
 1459 625 630 635 640
 1461 Ser Glu Leu Ser Pro Pro Met Leu Ile Glu His Pro Leu Arg Cys Leu
 1462 645 650 655
 1464 Val Leu Cys Ala Gln Val His Ala Gly Met Trp Arg Arg Asn Gly Phe
 1465 660 665 670
 1467 Ser Leu Val Asn Gln Ile Ile Tyr Tyr His Asn Val Lys Cys Arg Arg
 1468 675 680 685
 1470 Glu Met Phe Asn Ile Asp Val Val Met Leu Gln Thr Gly Val Ser Met
 1471 690 695 700
 1473 Met Asp Pro Asn His Phe Ile Met Ile Met Leu Ser Arg Phe Glu Leu
 1474 705 710 715 720
 1476 Tyr Gln Ile Phe Ser Ile Pro Asp Ile Gly Lys Arg Phe Ser Ser Gln
 1477 725 730 735
 1479 Ile Thr His Lys Asp Val Val Gln Gln Asn Asn Thr Leu Ile Glu Glu
 1480 740 745 750
 1482 Met Leu Tyr Ile Ile Ile Met Leu Val Gly Glu Arg Phe Ser Pro Gly
 1483 755 760 765
 1485 Val Gly Gln Val Asn Ala Ile Asp Glu Ile Lys Arg Glu Ile Ile His

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Input Set : A:\35966aseq.txt
Output Set: N:\CRF3\12072000\I724126.raw

1486 770 775 780
 1488 Glu Leu Ser Ile Lys Pro Met Ala His Ser Glu Leu Val Lys Ser Leu
 1489 785 790 795 800
 1491 Pro Glu Asp Glu Asn Lys Glu Thr Gly Met Glu Ser Val Ile Glu Ala
 1492 805 810 815
 1494 Val Ala His Ile Lys Lys Pro Gly Leu Thr Gly Arg Gly Met Tyr Glu
 1495 820 825 830
 1497 Leu Lys Pro Glu Cys Ala Lys Glu Phe Asn Leu Tyr Phe Tyr His Phe
 1498 835 840 845
 1500 Ser Arg Ala Glu Gln Ser Lys Ala Glu Glu Ala Gln Arg Lys Leu Lys
 1501 850 855 860
 1503 Arg Gln Asn Arg Glu Asp Thr Ala Leu Pro Pro Pro Val Leu Pro Pro
 1504 865 870 875 880
 1506 Phe Cys Pro Ile Phe Ala Ser Leu Val Asn Ile Leu Gln Ser Asp Val
 1507 885 890 895
 1509 Met Leu Cys Ile Met Glu Thr Ile Leu Gln Trp Ala Val Glu His Asn
 1510 900 905 910
 1512 Gly Tyr Ala Trp Ser Glu Ser Met Leu Gln Arg Val Leu His Leu Ile
 1513 915 920 925
 1515 Gly Met Ala Leu Gln Glu Glu Lys Gln His Leu Glu Asn Val Thr Glu
 1516 930 935 940
 1518 Glu His Val Val Thr Phe Thr Phe Thr Gln Lys Ile Ser Lys Pro Gly
 1519 945 950 955 960
 1521 Glu Ala Pro Lys Asn Ser Pro Ser Ile Leu Ala Met Leu Glu Thr Leu
 1522 965 970 975
 1524 Gln Asn Ala Pro Ile Leu Glu Val His Lys Asp Met Ile Arg Trp Ile
 1525 980 985 990
 1527 Leu Lys Thr Ile Asn Ala Val Lys Lys Met Arg Glu Ser Ser Pro Thr
 1528 995 1000 1005
 1530 Ser Pro Val Ala Gln Thr Glu Gly Thr Ile Met Glu Glu Ser Ser Arg
 1531 1010 1015 1020
 1533 Asp Lys Asp Ile Ala Glu Arg Lys Arg Lys Ala Glu Ile Ala Arg Leu
 E--> 1534 **025** 1030 1035 1040
 1536 Arg Arg Glu Lys Ile Met Ala Gln Met Ser Glu Met Glu Arg His Phe
 1537 1045 1050 1055
 1539 Ile Asp Glu Asn Ile Glu Leu Phe Gln Gln Thr Leu Glu Leu Asp Ala
 1540 1060 1065 1070
 1542 Ser Thr Ser Ala Val Leu Asp His Ser Pro Val Ala Ser Asp Met Thr
 1543 1075 1080 1085
 1545 Leu Thr Ala Ile Cys Pro Thr Gln Thr Gln Val Pro Gln Gln Arg Gln
 1546 1090 1095 1100
 1548 Phe Val Thr Lys Ile Leu Cys Gln Glu Glu Gln Glu Val Lys Val Glu
 E--> 1549 **105** 1110 1115 1120
 1551 Ser Arg Ala Met Val Ile Ala Ala Phe Val Gln Arg Ser Thr Val Leu
 1552 1125 1130 1135
 1554 Ser Lys Asn Ile Ser Lys Phe Ile Gln Asp Pro Glu Lys Tyr Asp Pro
 1555 1140 1145 1150
 1557 Leu Phe Met His Pro Asp Leu Ser Cys Gly Thr His Thr Ser Ser Cys
 1558 1155 1160 1165

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PATENT APPLICATION: US/09/724,126

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Input Set : A:\35966aseq.txt
Output Set: N:\CRF3\12072000\I724126.raw

1560 Gly His Ile Met His Ala His Cys Trp Gln Arg Tyr Phe Asp Ser Val
1561 1170 1175 1180
1563 ~~Arg~~ Ala Iys Glu Gln Arg Arg Gln Cys Arg Leu Arg Leu His Thr Ser
E--> 1564 185 1190 1195 1200
1566 Tyr Asp Val Glu Asn Glu Glu Phe Leu Cys Pro Leu Cys Glu Cys Leu
1567 1205 1210 1215
1569 Ser Asn Ile Val Ile Pro Leu Leu Pro Pro Arg Asn Ile Phe Asn
1570 1220 1225 1230
1572 Asn Arg Leu Asn Phe Ser Asp Cys Pro Asn Leu Thr Gln Trp Ile Arg
1573 1235 1240 1245
1575 Thr Ile Ser Gln Gln Ile Lys Ala Leu Glu Phe Leu Arg Lys Glu Glu
1576 1250 1255 1260
1578 Ser Thr Pro Asn Asn Ala Ser Ile Lys Asn Ser Glu Asn Val Asp Glu
E--> 1579 265 1270 1275 1280
1581 Leu Gln Leu Pro Glu Gly Phe Arg Pro Asp Phe Arg Pro Lys Ile Pro
1582 1285 1290 1295
1584 Tyr Ser Glu Ser Ile Lys Glu Met Leu Thr Thr Phe Gly Thr Ala Thr
1585 1300 1305 1310
1587 Tyr Lys Val Gly Leu Lys Val His Pro Asn Glu Glu Asp Pro Arg Val
1588 1315 1320 1325
1590 Pro Ile Met Cys Trp Glu Ser Cys Ala Tyr Thr Ile Gln Ser Ile Glu
1591 1330 1335 1340
1593 ~~Asn~~ Ile Leu Ser Asp Glu Asp Lys Pro Leu Phe Gly Pro Leu Pro Cys
E--> 1594 345 1350 1355 1360
1596 Arg Leu Asp Asp Cys Ieu Arg Ser Leu Thr Arg Phe Ala Ala Ala His
1597 1365 1370 1375
1599 Trp Ile Val Ala Ser Val Ser Val Val Gln Gly His Phe Cys Lys Leu
1600 1380 1385 1390
1602 Phe Ala Ser Leu Val Pro Asn Asp Ser His Glu Glu Leu Pro Cys Ile
1603 1395 1400 1405
1605 Leu Asp Ile Asp Met Phe His Leu Leu Val Gly Leu Val Leu Ala Phe
1606 1410 1415 1420
1608 ~~Asn~~ Ala Leu Gln Cys Gln Asp Phe Ser Gly Ile Ser Leu Gly Thr Gly
E--> 1609 425 1430 1435 1440
1611 Asp Leu His Ile Phe His Leu Val Thr Met Ala His Ile Ile Gln Ile
1612 1445 1450 1455
1614 Leu Leu Thr Ser Cys Thr Gln Glu Asn Gly Met Asp Gln Glu Asn Pro
1615 1460 1465 1470
1617 Pro Cys Glu Glu Glu Ser Ala Val Leu Ala Leu Tyr Lys Thr Leu His
1618 1475 1480 1485
1620 Gln Tyr Thr Gly Ser Ala Ile Lys Glu Ile Pro Ser Gly Trp His Leu
1621 1490 1495 1500
1623 ~~Arg~~ Ser Val Arg Ala Gly Ile Met Pro Phe Leu Lys Cys Ser Ala
E--> 1624 505 1510 1515 1520
1626 Leu Phe Phe His Ile Leu Asn Gly Val Pro Ser Pro Pro Asp Ile Gln
1627 1525 1530 1535
1629 Val Pro Gly Ile Ser His Phe Glu His Leu Cys Ser Tyr Leu Ser Leu
1630 1540 1545 1550
1632 Pro Asn Asn Leu Ile Cys Leu Phe Cys Glu Asn Ser Glu Ile Met Asn

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Input Set : A:\35966aseq.txt
Output Set: N:\CRF3\12072000\I724126.raw

1633 1555 1560 1565
1635 Ser Leu Ile Glu Ser Itp Cys Arg Asn Ser Glu Val Lys Arg Tyr Leu
1636 1570 1575 1580
1638 Glu Gly Glu Arg Asp Ala Ile Arg Tyr Pro Arg Glu Ser Asn Lys Leu
E--> 1639 585 1590 1595 1600
1641 Ile Asn Leu Pro Glu Asp Itp Ser Ser Leu Ile Asn Glu Ala Ser Asn
1642 1605 1610 1615
1644 Phe Ser Cys Pro Lys Ser Gly Cys Asp Lys Ser Arg Ala Pro Thr Leu
1645 1620 1625 1630
1647 Cys Leu Val Cys Gly Ser Leu Leu Cys Ser Glu Ser Tyr Cys Cys Glu
1648 1635 1640 1645
1650 Thr Glu Leu Glu Gly Glu Asp Val Gly Ala Cys Thr Ala His Thr Tyr
1651 1650 1655 1660
1653 Ser Cys Gly Ser Gly Val Gly Ile Phe Leu Arg Val Arg Glu Cys Glu
E--> 1654 665 1670 1675 1680
1656 Val Leu Phe Leu Ala Gly Lys Thr Lys Gly Cys Phe Tyr Ser Pro Pro
1657 1685 1690 1695
1659 Tyr Leu Asp Asp Tyr Gly Glu Thr Asp Cys Gly Leu Arg Arg Gly Asn
1660 1700 1705 1710
1662 Pro Leu His Leu Cys Lys Glu Arg Phe Lys Lys Ile Glu Lys Leu Itp
1663 1715 1720 1725
1665 His Glu His Ser Val Thr Glu Glu Ile Gly His Ala Glu Ala Asn
1666 1730 1735 1740
1668 Glu Thr Leu Val Gly Ile Asp Itp Glu His Leu
E--> 1669 745 1750 1755
2154 <210> SEQ ID NO: 6
2155 <211> LENGTH: 1755
2156 <212> TYPE: PRT
2157 <213> ORGANISM: Mouse
2159 <400> SEQUENCE: 6
PF13-15
2160 Met Ala Ser Glu Met Glu Pro Glu Val Glu Ala Ile Asp Arg Ser Leu
2161 1 5 10 15
2163 Leu Glu Cys Ser Ala Glu Glu Ile Ala Gly Arg Itp Leu Glu Ala Thr
2164 20 25 30
2166 Asp Leu Asn Arg Glu Val Itp Glu His Leu Ala His Cys Val Pro Lys
2167 35 40 45
2169 Ile Tyr Cys Arg Glu Pro Asn Pro Phe Pro Glu Lys Glu Asp Thr Leu
2170 50 55 60
2172 Ala Glu His Ile Leu Leu Glu Pro Met Glu Itp Tyr Ile Cys Ala Glu
2173 65 70 75 80
2175 Asp Pro Ala Leu Glu Phe Pro Lys Leu Glu Glu Ala Asn Lys Pro Ser
2176 80 90 95
2178 His Leu Cys Glu Arg Val Phe Lys Val Glu Glu Pro Thr Tyr Ser Cys
2179 100 105 110
2181 Arg Asp Cys Ala Val Asp Pro Thr Cys Val Leu Cys Met Glu Cys Phe
2182 115 120 125
2184 Leu Gly Ser Ile His Arg Asp His Arg Tyr Arg Met Thr Thr Ser Gly
2185 130 135 140
2187 Gly Gly Gly Phe Cys Asp Cys Gly Asp Thr Glu Ala Itp Lys Glu Gly

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Input Set : A:\35966aseq.txt
Output Set: N:\CRF3\12072000\I724126.raw

2188 145 150 155 160
 2190 Pro Tyr Cys Gln Lys His Lys Leu Ser Ser Ser Glu Val Val Glu Glu
 2191 165 170 175
 2193 Glu Asp Pro Leu Val His Leu Ser Glu Asp Val Ile Ala Arg Thr Tyr
 2194 180 185 190
 2196 Asn Ile Phe Ala Ile Met Phe Arg Tyr Ala Val Asp Ile Leu Thr Trp
 2197 195 200 205
 2199 Glu Lys Glu Ser Glu Leu Pro Glu Asp Leu Glu Val Ala Glu Lys Ser
 2200 210 215 220
 2202 Asp Thr Tyr Tyr Cys Met Leu Phe Asn Asp Glu Val His Thr Tyr Glu
 2203 225 230 235 240
 2205 Gln Val Ile Tyr Thr Leu Gln Lys Ala Val Asn Cys Thr Gln Lys Glu
 2206 245 250 255
 2208 Ala Ile Gly Phe Ala Thr Thr Val Asp Arg Asp Gly Arg Arg Pro Val
 2209 260 265 270
 2211 Arg Tyr Gln Asp Phe Gln Tyr Cys Asp Gln Ala Lys Thr Val Ile Val
 2212 275 280 285
 2214 Arg Asn Thr Ser Arg Gln Thr Lys Pro Leu Lys Val Gln Val Met His
 2215 290 295 300
 2217 Ser Ser Val Ala Ala His Gln Asn Phe Gly Leu Lys Ala Leu Ser Trp
 2218 305 310 315 320
 2220 Leu Gly Ser Val Ile Gly Tyr Ser Asp Gly Leu Arg Arg Ile Leu Cys
 2221 325 330 335
 2223 Gln Val Gly Leu Gln Glu Gly Pro Asp Gly Glu Asn Ser Ser Leu Val
 2224 340 345 350
 2226 Asp Arg Leu Met Leu Asn Asp Ser Lys Leu Trp Lys Gly Ala Arg Ser
 2227 355 360 365
 2229 Val Tyr His Gln Leu Phe Met Ser Ser Leu Leu Met Asp Leu Lys Tyr
 2230 370 375 380
 2232 Lys Lys Leu Phe Ala Leu Arg Phe Ala Lys Asn Tyr Arg Gln Leu Gln
 2233 385 390 395 400
 2235 Arg Asp Phe Met Gln Asp Asp His Gln Arg Ala Val Ser Val Thr Ala
 2236 405 410 415
 2238 Leu Ser Val Gln Phe Phe Thr Ala Pro Thr Leu Ala Arg Met Leu Leu
 2239 420 425 430
 2241 Thr Glu Glu Asn Leu Met Thr Val Ile Ile Lys Ala Phe Met Asp His
 2242 435 440 445
 2244 Leu Lys His Arg Asp Ala Gln Gly Arg Phe Gln Phe Glu Arg Tyr Thr
 2245 450 455 460
 2247 Ala Leu Gln Ala Phe Ile Phe Arg Arg Val Gln Ser Leu Ile Leu Asp
 2248 465 470 475 480
 2250 Leu Lys Tyr Val Leu Ile Ser Lys Pro Thr Glu Trp Ser Asp Glu Leu
 2251 485 490 495
 2253 Arg Gln Lys Phe Leu Gln Gly Phe Asp Ala Phe Leu Glu Leu Leu Lys
 2254 500 505 510
 2256 Cys Met Gln Gly Met Asp Pro Ile Thr Arg Gln Val Gly Gln His Ile
 2257 515 520 525
 2259 Glu Met Glu Pro Gln Trp Gln Ala Ala Phe Thr Leu Gln Met Lys Leu
 2260 530 535 540

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Input Set : A:\35966aseq.txt
Output Set: N:\CRF3\12072000\I724126.raw

2262 Thr His Val Ile Ser Met Val Gln Asp Itp Cys Ala Leu Asp Glu Lys
 2263 545 550 555 560
 2265 Val Leu Ala Glu Ala Ile Lys Cys Leu Ala Val Leu Thr Gln Cys
 2266 565 570 575
 2268 His Gly Gly Phe Ile Asp Gly Glu Gln Pro Ile Thr Leu Ser Ile Cys
 2269 580 585 590
 2271 Gly His Ser Val Glu Ile Arg Tyr Cys Val Ser Gln Glu Lys Val
 2272 595 600 605
 2274 Ser Ile His Leu Pro Ile Ser Arg Leu Leu Ala Gly Leu His Val Leu
 2275 610 615 620
 2277 Leu Ser Lys Ser Gln Val Ala Tyr Lys Phe Pro Gln Leu Leu Pro Leu
 2278 625 630 635 640
 2280 Ser Glu Leu Ser Pro Pro Met Leu Ile Glu His Pro Leu Arg Cys Leu
 2281 645 650 655
 2283 Val Leu Cys Ala Gln Val His Ala Gly Met Trp Arg Arg Asn Gly Phe
 2284 660 665 670
 2286 Ser Leu Val Asn Gln Ile Tyr Tyr His Asn Val Lys Cys Arg Arg
 2287 675 680 685
 2289 Gln Met Phe Asp Iys Asp Ile Val Met Leu Gln Thr Gly Val Ser Met
 2290 690 695 700
 2292 Met Asp Pro Asn His Phe Leu Met Ile Met Leu Ser Arg Phe Glu Leu
 2293 705 710 715 720
 2295 Tyr Gln Leu Phe Ser Thr Pro Asp Tyr Gly Lys Arg Phe Ser Ser Glu
 2296 725 730 735
 2298 Val Thr His Iys Asp Val Val Gln Gln Asn Asn Thr Leu Ile Glu Glu
 2299 740 745 750
 2301 Met Leu Tyr Ile Ile Met Leu Val Gln Glu Arg Phe Asn Pro Gly
 2302 755 760 765
 2304 Val Gly Gln Val Ala Ala Thr Asp Glu Ile Lys Arg Glu Ile Ile His
 2305 770 775 780
 2307 Gln Leu Ser Ile Lys Pro Met Ala His Ser Glu Leu Val Lys Ser Leu
 2308 785 790 795 800
 2310 Pro Glu Asp Gln Asn Lys Glu Ile Gly Met Glu Ser Val Ile Glu Ser
 2311 805 810 815
 2313 Val Ala His Phe Lys Iys Pro Gly Leu Thr Gly Arg Gly Met Tyr Gln
 2314 820 825 830
 2316 Leu Lys Pro Glu Cys Ala Iys Glu Phe Asn Leu Tyr Phe Tyr His Phe
 2317 835 840 845
 2319 Ser Arg Ala Gln Gln Ser Iys Ala Glu Glu Ala Gln Arg Lys Leu Lys
 2320 850 855 860
 2322 Arg Glu Asn Iys Glu Asp Ile Ala Leu Pro Pro Ala Leu Pro Pro
 2323 865 870 875 880
 2325 Phe Cys Pro Leu Phe Ala Ser Leu Val Asn Ile Leu Gln Cys Asp Val
 2326 885 890 895
 2328 Met Leu Tyr Ile Met Gln Ile Leu Gln Itp Ala Val Glu His His
 2329 900 905 910
 2331 Gly Ser Ala Ile Ser Gln Ser Met Leu Gln Arg Val Leu His Leu Ile
 2332 915 920 925
 2334 Gly Met Ala Leu Gln Gln Glu Lys His His Leu Glu Asn Ala Val Glu

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Input Set : A:\35966aseq.txt
Output Set: N:\CRF3\12072000\1724126.raw

2335 930 935 940
2337 Gly His Val Gln Thr Phe Thr Phe Thr Gln Lys Ile Ser Lys Pro Gly
2338 945 950 955 960
2340 Asp Ala Pro His Asn Ser Pro Ser Ile Leu Ala Met Leu Glu Thr Leu
2341 955 970 975
2343 Gln Asn Ala Pro Ser Leu Glu Ala His Lys Asp Met Ile Arg Trp Leu
2344 980 985 990
2346 Leu Lys Met Phe Asn Ala Ile Lys Lys Ile Arg Glu Cys Ser Ser Ser
2347 995 1000 1005
2349 Ser Pro Val Ala Glu Ala Glu Gly Thr Ile Met Gln Glu Ser Ser Arg
2350 1010 1015 1020
2352 Asp Lys Asp Lys Ala Glu Arg Lys Arg Lys Ala Glu Ile Ala Arg Ieu
E--> 2353 025 1030 1035 1040
2355 Arg Arg Glu Lys Ile Met Ala Gln Met Ser Glu Met Gln Arg His Phe
2356 1045 1050 1055
2358 Ile Asp Glu Asn Lys Glu Leu Phe Gln Gln Thr Leu Glu Leu Asp Thr
2359 1060 1065 1070
2361 Ser Ala Ser Ala Thr Leu Asp Ser Ser Pro Pro Val Ser Asp Ala Ala
2362 1075 1080 1085
2364 Leu Thr Ala Leu Gly Pro Ala Gln Thr Gln Val Pro Glu Pro Arg Gln
2365 1090 1095 1100
2367 Phe Val Thr Cys Ile Leu Cys Gln Glu Glu Gln Glu Val Thr Val GLY
E--> 2368 105 1110 1115 1120
2370 Ser Arg Ala Met Val Leu Ala Ala Phe Val Gln Arg Ser Thr Val Leu
2371 1125 1130 1135
2373 Ser Lys Asp Arg Thr Lys Thr Ile Ala Asp Pro Glu Lys Tyr Asp Pro
2374 1140 1145 1150
2376 Leu Phe Met His Pro Asp Leu Ser Cys Gly Thr His Thr Gly Ser Cys
2377 1155 1160 1165
2379 Gly His Val Met His Ala His Cys Itp Gln Arg Tyr Phe Asp Ser Val
2380 1170 1175 1180
2382 Gln Ala Lys Gln Gln Arg Gln Gln Arg Leu Arg Leu His Thr Ser
E--> 2383 185 1190 1195 1200
2385 Tyr Asp Val Gln Asn Gln Gln Phe Leu Cys Pro Leu Cys Glu Cys Leu
2386 1205 1210 1215
2388 Ser Asn Thr Val Ile Pro Leu Leu Pro Pro Arg Ser Ile Leu Ser
2389 1220 1225 1230
2391 Arg Arg Leu Asn Phe Ser Asp Gln Pro Asp Leu Ala Gln Itp Thr Arg
2392 1235 1240 1245
2394 Ala Val Thr Ile Gln Ile Ile Val Val Gln Met Leu Arg Arg Lys His
2395 1250 1255 1260
2397 Asn Ala Ala Asp Thr Ser Ser Glu Asp Thr Glu Ala Met Asn Ile
E--> 2398 265 1270 1275 1280
2400 Ile Pro Ile Pro Gln Gln Phe Arg Pro Asp Phe Tyr Pro Arg Asn Pro
2401 1285 1290 1295
2403 Tyr Ser Asp Ser Ile Lys Glu Met Leu Thr Thr Phe Gly Thr Ala Ala
2404 1300 1305 1310
2406 Tyr Lys Val Glu Ile Lys Val His Pro Asn Glu Gly Asp Pro Arg Val
2407 1315 1320 1325

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Input Set : A:\35966ased.txt
Output Set: N:\CRF3\12072000\1724126.raw

2409 Pro Ile Leu Cys Itp Gly Thr Cys Ala Tyr Thr Ile Gln Ser Ile Glu
2410 1330 1335 1340
2412 Arg Ile Leu Ser Asp Glu Glu Lys Pro Val Phe Gly Pro Leu Pro Cys
E--> 2413 345 1350 1355 1360
2415 Arg Leu Asp Asp Cys Leu Arg Ser Leu Thr Arg Phe Ala Ala Ala His
2416 1365 1370 1375
2418 Itp Thr Val Ala Leu Leu Pro Val Val Gln Gly His Phe Cys Lys Leu
2419 1380 1385 1390
2421 Phe Ala Ser Leu Val Pro Ser Asp Ser Tyr Glu Asp Leu Pro Cys Ile
2422 1395 1400 1405
2424 Leu Asp Ile Asp Met Phe His Leu Leu Val Gly Leu Val Leu Ala Phe
2425 1410 1415 1420
2427 Pro Ala Leu Gln Cys Gln Asp Phe Ser Gly Ser Ser Leu Ala Thr Gly
E--> 2428 425 1430 1435 1440
2430 Asp Leu His Ile Phe His Leu Val Thr Met Ala His Ile Val Gln Ile
2431 1445 1450 1455
2433 Leu Leu Thr Ser Cys Thr Glu Glu Asn Gly Met Asp Gln Glu Asn Pro
2434 1460 1465 1470
2436 Thr Gly Glu Glu Glu Ile Ala Ile Leu Ser Leu His Lys Thr Ile His
2437 1475 1480 1485
2439 Gln Tyr Thr Gly Ser Ala Ile Lys Glu Ala Pro Ser Gly Trp His Leu
2440 1490 1495 1500
2442 Tyr Arg Ser Val Arg Ala Ala Ile Met Pro Phe Leu Lys Cys Ser Ala
E--> 2443 505 1510 1515 1520
2445 Leu Phe Phe His Tyr Leu Asn Glu Val Pro Ala Pro Pro Asp Leu Gln
2446 1525 1530 1535
2448 Val Ser Cys Thr Ser His Phe Glu His Leu Cys Asn Tyr Leu Ser Leu
2449 1540 1545 1550
2451 Pro Thr Asn Leu Ile His Leu Phe Glu Glu Asn Ser Asp Ile Met Asn
2452 1555 1560 1565
2454 Ser Leu Ile Gln Ser Trp Cys Gln Asn Ser Gln Val Lys Arg Tyr Leu
2455 1570 1575 1580
2457 Asn Gly Glu Arg Glu Ala Ile Ser Tyr Pro Arg Gly Ala Asn Lys Leu
E--> 2458 585 1590 1595 1600
2460 Ile Asp Ile Pro Glu Asp Tyr Ser Ser Leu Ile Asn Gln Ala Ser Asn
2461 1605 1610 1615
2463 Phe Ser Cys Pro Ile Ser Gly Gly Asp Lys Ser Arg Ala Pro Thr Leu
2464 1620 1625 1630
2466 Cys Leu Val Cys Gly Ser Ile Leu Cys Ser Gln Ser Tyr Cys Cys Gln
2467 1635 1640 1645
2469 Ala Glu Ile Gln Glu Asp Val Gly Ala Cys Thr Ala His Thr Tyr
2470 1650 1655 1660
2472 Ser Cys Gly Ser Ile Ala Glu Ile Phe Leu Arg Val Arg Glu Cys Gln
E--> 2473 665 1670 1675 1680
2475 Val Leu Phe Ile Gln Ile Gln Ile Lys Thr Lys Gly Cys Phe Tyr Ser Pro Pro
2476 1680 1690 1695
2478 Tyr Leu Asp Asp Ile Gly Glu Thr Asp Gln Gly Leu Arg Arg Gly Asn
2479 1700 1705 1710
2481 Pro Leu His Ile Cys Gln Cys Arg Phe Arg Lys Ile Gln Lys Leu Trp

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Input Set : A:\J5966aseq.txt
Output Set: N:\CRF3\12072000\1724126.raw

2482 1715 1720 1725
2484 Gln Gin His Ser Ile Thr Glu Glu Ile Gly His Ala Gln Glu Ala Asn
2485 1730 1735 1740
2487 Gln Thr Leu Val Gly Ile Asp Trp Gln His Leu
E--> 2488 745 1750 1755
3133 <210> SEQ ID NO: 19
3134 <211> LENGTH: 1735
3135 <212> TYPE: PRI
3136 <213> ORGANISM: Homo sapiens
3138 <400> SEQUENCE: 19
D1734 p.19
3139 Ala Met Glu Gly Asn Met Ala Asp Glu Glu Ala Gly Ile Glu Arg
3140 1 5 10 15
3142 Met Glu Ile Ser Ala Glu Leu Pro Gln Ile Pro Gln Arg Leu Ala Ser
3143 20 25 30
3145 Trp Trp Asp Gin Gin Val Asp Phe Tyr Thr Ala Phe Leu His His Leu
3146 35 40 45
3148 Ala Gln Leu Val Pro Glu Ile Tyr Phe Ala Glu Met Asp Pro Asp Leu
3149 50 55 60
3151 Glu Lys Gln Asn Glu Ser Val Gln Met Ser Ile Phe Thr Pro Leu Glu
3152 65 70 75 80
3154 Trp Tyr Leu Phe Gln Glu Asp Pro Asp Ile Cys Leu Glu Lys Leu Lys
3155 85 90 95
3157 His Ser Gly Ala Phe Gln Leu Cys Gly Arg Val Phe Lys Ser Gly Glu
3158 105 110
3160 Ile Thr Ile Ser Cys Arg Asp Cys Ala Ile Asp Pro Ile Cys Val Leu
3161 115 120 125
3163 Cys Met Asp Ile Phe Asn Asp Ser Val His Lys Asn His Arg Tyr Lys
3164 130 135 140
3166 Met His Thr Ser Ile Gly Gly Gly Phe Cys Asp Cys Gly Asp Thr Glu
3167 145 150 155 160
3169 Ala Trp Lys Ile Glu Pro Phe Cys Val Asn His Glu Pro Gln Arg Ala
3170 165 170 175
3172 Gly Thr Ile Ile Gln Asn Ser Arg Cys Pro Leu Asn Glu Glu Val Ile
3173 185 190
3175 Val Gin Ala Asn Ile Ile Phe Pro Ser Val Ile Lys Tyr Val Val Glu
3176 195 200 205
3178 Met Thr Ile Ile Gln Glu Glu Lys Glu Leu Pro Pro Glu Leu Gln Ile
3179 210 215 220
3181 Arg Glu Lys Asn Gln Asn Tyr Tyr Cys Val Leu Phe Asn Asp Glu His
3182 225 230 235 240
3184 His Ser Tyr Asp Gln Val Ile Ile Ser Leu Gln Arg Ala Leu Asp Cys
3185 245 250 255
3187 Glu Leu Ala Gln Ala Gln Leu His Thr Ala Ile Asp Lys Glu Gly
3188 260 265 270
3190 Arg Arg Ala Val Ile Ala Gly Ala Tyr Ala Ala Cys Gln Glu Ala Lys
3191 275 280 285
3193 Glu Asp Ile Ile Ser His Ser Glu Asn Val Ser Gln His Pro Leu His
3194 290 295 300
3196 Val Glu Val Leu His Ser Glu Ile Met Ala His Gln Lys Phe Ala Leu

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PATENT APPLICATION: US/09/724,126

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Input Set : A:\35966aseq.txt
Output Set: N:\CRF3\12072000\I724126.raw

| | | | | |
|------|---|-----|-----|-----|
| 3197 | 305 | 310 | 315 | 320 |
| 3199 | Arg Leu Gly Ser Trp Met Asn Lys Ile Met Ser Tyr Ser Ser Asp Phe | | | |
| 3200 | | 325 | 330 | 335 |
| 3202 | Arg Gln Ile Phe Cys Gln'Ala Cys Leu Arg Glu Glu Pro Asp Ser Glu | | | |
| 3203 | | 340 | 345 | 350 |
| 3205 | Asn Pro Cys Leu Ile Ser Arg Leu Met Leu Trp Asp Ala Lys Leu Tyr | | | |
| 3206 | | 355 | 360 | 365 |
| 3208 | Lys Gly Ala Arg Lys Ile Leu His Glu Leu Ile Phe Ser Ser Phe Phe | | | |
| 3209 | | 370 | 375 | 380 |
| 3211 | Met Glu Met Gln Tyr Lys Lys Leu Phe Ala Met Glu Phe Val Lys Tyr | | | |
| 3212 | | 385 | 390 | 395 |
| 3214 | Tyr Lys Gln Leu Gln Lys Glu Tyr Ile Ser Asp Asp His Asp Arg Ser | | | |
| 3215 | | 405 | 410 | 415 |
| 3217 | Ile Ser Ile Thr Ala Leu Ser Val Gln Met Phe Thr Val Pro Thr Leu | | | |
| 3218 | | 420 | 425 | 430 |
| 3220 | Ala Arg His Leu Ile Glu Glu Gln Asn Val Ile Ser Val Ile Thr Glu | | | |
| 3221 | | 435 | 440 | 445 |
| 3223 | Thr Leu Leu Glu Val Leu Pro Glu Tyr Leu Asp Arg Asn Asn Lys Phe | | | |
| 3224 | | 450 | 455 | 460 |
| 3226 | Asn Phe Gln Glu Tyr Ser Gln Asp Lys Leu Gly Arg Val Tyr Ala Val | | | |
| 3227 | | 465 | 470 | 475 |
| 3229 | Ile Cys Asp Leu Lys Tyr Ile Leu Ile Ser Lys Pro Thr Ile Trp Thr | | | |
| 3230 | | 485 | 490 | 495 |
| 3232 | Glu Arg Leu Arg Met Gln Phe Leu Glu Gly Phe Arg Ser Phe Leu Lys | | | |
| 3233 | | 500 | 505 | 510 |
| 3235 | Ile Leu Thr Cys Met Gln Gly Met Glu Glu Ile Arg Arg Gln Val Gly | | | |
| 3236 | | 515 | 520 | 525 |
| 3238 | Gln His Ile Glu Val Asp Pro Asp Trp Glu Ala Ala Ile Ala Ile Gln | | | |
| 3239 | | 530 | 535 | 540 |
| 3241 | Met Gln Leu Lys Asn Ile Leu Leu Met Phe Gln Glu Trp Cys Ala Cys | | | |
| 3242 | | 545 | 550 | 555 |
| 3244 | Asp Glu Glu Leu Leu Leu Val Ala Tyr Lys Glu Cys His Lys Ala Val | | | |
| 3245 | | 565 | 570 | 575 |
| 3247 | Met Arg Cys Ser Ile Ser Phe Ile Ser Ser Ser Lys Thr Val Val Gln | | | |
| 3248 | | 585 | 590 | 590 |
| 3250 | Ser Cys Gly His Ser Leu Glu Thr Lys Ser Tyr Arg Val Ser Glu Asp | | | |
| 3251 | | 595 | 600 | 605 |
| 3253 | Leu Val Ser Ile His Leu Pro Leu Ser Arg Thr Leu Ala Gly Leu His | | | |
| 3254 | | 610 | 615 | 620 |
| 3256 | Val Arg Leu Ser Arg Leu Gln Ala Val Ser Arg Leu His Glu Phe Val | | | |
| 3257 | | 625 | 630 | 640 |
| 3259 | Ser Phe Glu Asp Phe Gln Val Glu Val Leu Val Glu Tyr Pro Leu Arg | | | |
| 3260 | | 645 | 650 | 655 |
| 3262 | Cys Leu Val Ile Val Ala Gln Val Val Ala Glu Met Trp Arg Arg Asn | | | |
| 3263 | | 660 | 665 | 670 |
| 3265 | Gly Leu Ser Ile Ile Ser Gln Val Phe Tyr Tyr Gln Asp Val Lys Cys | | | |
| 3266 | | 675 | 680 | 685 |
| 3268 | Arg Glu Glu Met Tyr Asp Lys Asp Ile Ile Met Leu Gln Ile Gln Ala | | | |
| 3269 | | 690 | 695 | 700 |

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/724,126

DATE: 12/07/2000
TIME: 07:57:44

Input Set : A:\35966aseq.txt
Output Set: N:\CRF3\12072000\I724126.raw

3271 Ser Leu Met Asp Pro Asn Lys Phe Leu Leu Leu Val Leu Gln Arg Tyr
 3272 705 710 715 720
 3274 Glu Leu Ala Glu Ala Phe Asn Lys Thr Ile Ser Thr Lys Asp Gln Asp
 3275 725 730 735
 3277 Leu Ile Lys Cln Ivr Asn Thr Leu Ile Glu Glu Met Leu Gln Val Leu
 3278 740 745 750
 3280 Ile Tyr Ile Val Giv Glu Arg Tyr Val Pro Gly Val Gly Asn Val Thr
 3281 755 760 765
 3283 Lys Glu Glu Val Thr Met Arg Glu Ile Ile His Leu Leu Cys Ile Glu
 3284 770 775 780
 3286 Pro Met Pro His Ser Ala Ile Ala Lys Asn Leu Pro Glu Asn Glu Asn
 3287 785 790 795 800
 3289 Asn Glu Thr Gly Leu Glu Asn Val Ile Asn Lys Val Ala Thr Phe Lys
 3290 805 810 815
 3292 Lys Pro Gly Val Ser Gly His Gly Val Tyr Glu Leu Lys Asp Gln Ser
 3293 820 825 830
 3295 Leu Lys Asp Phe Asn Met Tyr Phe Tyr His Tyr Ser Lys Thr Gln His
 3296 835 840 845
 3298 Ser Lys Ala Glu His Met Gln Lys Lys Arg Arg Lys Gln Glu Asn Lys
 3299 850 855 860
 3301 Asp Glu Ala Leu Pro Pro Pro Pro Pro Glu Phe Cys Pro Ala Phe
 3302 865 870 875 880
 3304 Ser Lys Val Ile Asn Leu Leu Asn Cys Asp Ile Met Met Tyr Ile Leu
 3305 885 890 895
 3307 Arg Thr Val Thr Gln Arg Ala Ile Asp Thr Asp Ser Asn Leu Itp Thr
 3308 900 905 910
 3310 Glu Gly Met Ile Gln Met Ala Phe His Ile Leu Ala Leu Gly Ile Leu
 3311 915 920 925
 3313 Glu Glu Lys Gln Ile Leu Gln Iys Ala Pro Glu Glu Glu Val Thr Phe
 3314 930 935 940
 3316 Asp Phe Tyr His Lys Ala Ser Arg Leu Gly Ser Ser Ala Met Asn Ile
 3317 945 950 955 960
 3319 Gln Met Leu Ile Gln Iys Leu Lys Gly Ile Pro Gln Leu Gln Gly Gln
 3320 965 970 975
 3322 Lys Asp Met Ile Thr Itp Ile Leu Gln Met Phe Asp Thr Val Lys Arg
 3323 980 985 990
 3325 Leu Arg Glu Iys Ser Gys Leu Ile Val Ala Thr Thr Ser Gly Ser Glu
 3326 995 1000 1005
 3328 Ser Ile Lys Asn Asp Gln Ile Thr His Asp Lys Glu Lys Ala Glu Arg
 3329 1010 1015 1020
 3331 Lys Arg Lys Ala Gln Ala Ala Arg Leu His Arg Gln Lys Ile Met Ala
 3332 1025 1030 1035 1040
 3334 Gln Met Ser Ala Leu Gln Iys Asn Phe Ile Glu Thr His Lys Leu Met
 3335 1045 1050 1055
 3337 Tyr Asp Asn Thr Ser Gly Met Pro Gly Lys Glu Asp Ser Ile Met Gln
 3338 1060 1065 1070
 3340 Gln Glu Ser Thr Pro Ala Val Ser Asp Tyr Ser Arg Ile Ala Leu Gly
 3341 1075 1080 1085
 3343 Pro Lys Arg Glu Pro Ser Val Thr Glu Lys Glu Val Leu Thr Cys Ile

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/724,126

DATE: 12/07/2000
TIME: 07:57:44

Input Set : A:\J5966ased.txt
Output Set: N:\CRF3\12072000\1724126.raw

| | | | | |
|------|---|------|------|------|
| 3344 | 1090 | 1095 | 1100 | |
| 3346 | Leu Cys Gln Glu Glu Gln Glu Val Lys Ile Glu Asn Asn Ala Met Val | | | |
| 3347 | 1105 | 1110 | 1115 | 1120 |
| 3349 | Leu Ser Ala Cys Val Gln Lys Ser Thr Ala Leu Thr Gln His Arg Gly | | | |
| 3350 | 1125 | 1130 | 1135 | |
| 3352 | Lys Pro Ile Glu Leu Ser Gly Glu Ala Leu Asp Pro Leu Phe Met Asp | | | |
| 3353 | 1140 | 1145 | 1150 | |
| 3355 | Pro Asp Leu Ala Tyr Gly Thr Tyr Gly Ser Cys Gly His Val Met | | | |
| 3356 | 1155 | 1160 | 1165 | |
| 3358 | His Ala Val Cys Itp Gln Lys Tyr Phe Glu Ala Val Gln Leu Ser Ser | | | |
| 3359 | 1170 | 1175 | 1180 | |
| 3361 | Gln Gln Arg Ile His Val Asp Leu Phe Asp Leu Glu Ser Gly Glu Tyr | | | |
| 3362 | 1185 | 1190 | 1195 | 1200 |
| 3364 | Leu Cys Pro Leu Cys Ivs Ser Leu Cys Asn Thr Val Ile Pro Ile Ile | | | |
| 3365 | 1205 | 1210 | 1215 | |
| 3367 | Pro Leu Gln Pro Gln Ivs Ile Asn Ser Glu Asn Ala Asp Ala Leu Ala | | | |
| 3368 | 1220 | 1225 | 1230 | |
| 3370 | Gln Leu Leu Thr Leu Ala Arg Itp Ile Gln Thr Val Leu Ala Arg Ile | | | |
| 3371 | 1235 | 1240 | 1245 | |
| 3373 | Ser Gly Tyr Asn Ile Arg His Ala Lys Glu Glu Asn Pro Ile Pro Ile | | | |
| 3374 | 1250 | 1255 | 1260 | |
| 3376 | Phe Asp Asn Gln Glu Met Gly Asp Ser Thr Leu Glu Phe His Ser Ile | | | |
| 3377 | 1265 | 1270 | 1275 | 1280 |
| 3379 | Leu Ser Phe Gln Val Glu Ser Ser Ile Lys Tyr Ser Asn Ser Ile Lys | | | |
| 3380 | 1285 | 1290 | 1295 | |
| 3382 | Glu Met Val Ile Itp Phe Ala Thr Thr Ile Tyr Arg Ile Gly Leu Lys | | | |
| 3383 | 1295 | 1305 | 1310 | |
| 3385 | Val Pro Pro Asp Ile Arg Asp Pro Arg Val Pro Met Leu Thr Trp Ser | | | |
| 3386 | 1315 | 1320 | 1325 | |
| 3388 | Thr Cys Ala Phe Ile Ile Gln Ala Ile Glu Asn Leu Leu Gly Asp Gln | | | |
| 3389 | 1330 | 1345 | 1340 | |
| 3391 | Gly Lys Pro Leu Phe Gln Ala Leu Gln Asn Arg Gln His Asn Gly Leu | | | |
| 3392 | 1345 | 1350 | 1355 | 1360 |
| 3394 | Lys Ala Leu Met Gln Phe Ala Val Ala Gln Arg Ile Thr Cys Pro Gln | | | |
| 3395 | 1365 | 1370 | 1375 | |
| 3397 | Val Leu Ile Ile Gln Leu Val Arg Leu Leu Ser Val Val Leu Pro | | | |
| 3398 | 1380 | 1385 | 1390 | |
| 3400 | Asn Ile Lys Ser Gln Asp Thr Pro Cys Leu Leu Ser Ile Asp Leu Phe | | | |
| 3401 | 1395 | 1400 | 1405 | |
| 3403 | His Val Leu Val Val Ala Val Leu Ala Phe Pro Ser Leu Tyr Trp Asp | | | |
| 3404 | 1410 | 1415 | 1420 | |
| 3406 | Asp Pro Val Asp Ile Gln Pro Ser Ser Val Ser Ser Tyr Asn His | | | |
| 3407 | 1425 | 1430 | 1435 | 1440 |
| 3409 | Leu Tyr Leu Phe His Leu Ile Thr Met Ala His Met Leu Gln Ile Leu | | | |
| 3410 | 1445 | 1450 | 1455 | |
| 3412 | Leu Thr Val Itp Ile Gln Pro Leu Ala Gln Val Gln Glu Asp Ser | | | |
| 3413 | 1460 | 1465 | 1470 | |
| 3415 | Glu Glu Ala His Ser Ala Ser Ser Phe Phe Ala Glu Ile Ser Gln Tyr | | | |
| 3416 | 1475 | 1480 | 1485 | |

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/724,126

DATE: 12/07/2000
TIME: 07:57:44

Input Set : A:\35966ased.txt
Output Set: N:\CRF3\12072000\1724126.raw

3418 Thr Ser Gly Ser Ile Gly Cys Asp Ile Pro Gly Trp Tyr Leu Trp Val
3419 1490 1495 1500
3421 Ser Leu Lys Asn Gly Ile Thr Pro Tyr Leu Arg Cys Ala Ala Leu Phe
3422 1505 1510 1515 1520
3424 Phe His Tyr Leu Leu Gly Val Thr Pro Pro Glu Glu Leu His Thr Asn
3425 1525 1530 1535
3427 Ser Ala Glu Gly Glu Ivr Ser Ala Leu Cys Ser Tyr Leu Ser Leu Pro
3428 1540 1545 1550
3430 Thr Asn Leu Phe Leu Leu Phe Gln Glu Tyr Trp Asp Thr Val Arg Pro
3431 1555 1560 1565
3433 Leu Leu Gln Arg Arg Cys Ala Asp Pro Ala Leu Leu Asn Cys Leu Lys
3434 1570 1575 1580
3436 Gln Lys Asn Thr Val Val Arg Tyr Pro Arg Lys Arg Asn Ser Leu Ile
3437 1585 1590 1595 1600
3439 Glu Leu Pro Asp Asp Tyr Ser Cys Leu Leu Asn Gln Ala Ser His Phe
3440 1605 1610 1615
3442 Arg Cys Pro Arg Ser Ala Asp Asp Glu Arg Lys His Pro Val Leu Cys
3443 1620 1625 1630
3445 Leu Phe Cys Gly Ala Ile Leu Cys Ser Gln Asn Ile Cys Cys Gln Glu
3446 1635 1640 1645
3448 Ile Val Asn Gly Glu Glu Val Gly Ala Cys Ile Phe His Ala Leu His
3449 1650 1655 1660
3451 Cys Lys Ala Arg Gly Cys Ala Tyr Pro Ala Pro Tyr Leu Asp Glu Tyr
3452 1665 1670 1675 1680
3454 Gly Glu Thr Asp Pro Gly Leu Lys Arg Gly Asn Pro Leu His Leu Ser
3455 1685 1690 1695
3457 Arg Glu Arg Tyr Arg Lys Leu His Leu Val Trp Gln Gln His Cys Ile
3458 1700 1705 1710
3460 Ile Glu Glu Ile Ala Arg Ser Gln Glu Thr Asn Gln Gln Met Leu Phe Gly
3461 1713 1720 1725
E--> 3463 Phe Asn Trp Gln Leu Leu 1735
E--> 3464 1730

delete
do not count ending stop codon

see next page for more errors

09/29/26

20

<210> 18
<211> 5205
<212> DNA
<213> Homo sapiens

<400> 18
atggcgacg aggaggctgg aggtactgag aggatggaaa tcagcgccga gttaccccg 60
acccctcagc gtctggcatc ttgggtggat cagcaagttg attttatac tgctttctt 120
catcatttgg cacaatttgtt gccagaaaatt tactttgctg aatggaccc agacttggaa 180
aaggcaggagg aaagtgtaca aatgtcaata ttcactccac tggaatggta cttatttgg 240
gaagatccag atatttgctt agagaaaattg aagcacagtg gagcatttca gctttgtggg 300
agggtttca aaagtggaga gacaacctat tcttgcaggg attgtcaat tgatccaaca 360
tgtgtactct gtatggactg cttccaggac agtgttcata aaaatcatcg ttacaagatg 420
catacttcta ctggaggagg gttctgtgac tgtggagaca cagaggcatg gaaaactggc 480
ccttttgtg taaatcatga acctggaga gcaggtacta taaaagagaa ttcacgctgt 540
ccgttgaatg aagaggtaat tgtccaagcc aggaaaatat ttccttcagt gataaaaatat 600
gtcgtagaaa tgactataatg ggaagaggaa aaagaactgc ctcctgaact ccagataagg 660
kmryycvndh hsydhgtcat atacagccta caaagagctc ttgactgtga gctcgccagag 720
gcccaaggatgc ataccactgc cattgacaaa gagggtcgctc gggctgttaa agcgggagct 780

see
item 10
in
our
summary sheet

(only the envied portion
of seq. 18 shown)

VERIFICATION SUMMARY
PATENT APPLICATION: US/09/724,126

DATE: 12/07/2000
TIME: 07:57:45

Input Set : A:\35966aseq.txt
Output Set: N:\CRF3\12072000\I724126.raw

L:11 M:270 C: Current Application Number differs, Replaced Application Number
L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:707 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
M:332 Repeated in SeqNo=2
L:1534 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:4
M:332 Repeated in SeqNo 4
L:2353 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:6
M:332 Repeated in SeqNo=6
L:2980 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:18
L:2980 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:18
L:2980 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:18
L:2980 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:18
L:2980 M:340 W: (46) "n" or "xen" used: Feature required, for SEQ ID#:18
L:3463 M:342 E: Invalid Step Code Or Error, STOP CODON:*

L:3464 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:19

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/724,126

DATE: 12/07/2000
TIME: 07:57:43

Input Set : A:\35966aseq.txt
Output Set: N:\CRF3\12072000\I724126.raw

703 Glu Ile Thr His Asp Lys Glu Lys Ala Glu Arg Lys Arg Lys Ala Glu
704 1010 1015 1020
706 Ala Ala Arg Leu His Arg Glu Lys Ile Met Ala Gln Met Ser Ala Leu
E--> 707 1025 1030 1035 1040
709 Gln Lys Asn Phe Ile Glu Thr His Lys Leu Met Tyr Asp Asn Thr Ser
710 1045 1050 1055
712 Glu Met Pro Gly Lys Glu Asp Ser Ile Met Glu Glu Ser Thr Pro
713 1050 1065 1070
715 Ala Val Ser Asp Tyr Ser Arg Ile Ala Leu Gly Pro Lys Arg Gly Pro
716 1075 1080 1085
718 Ser Val Thr Glu Lys Glu Val Leu Thr Cys Ile Leu Cys Gln Gln Glu
719 1090 1095 1100
721 Glu Gln Val Lys Ile Glu Asn Asn Ala Met Val Leu Ser Ala Cys Val
E--> 722 105 1105 1110 1115 1120
724 Gln Lys Ser Thr Ala Leu Thr Gln His Arg Gly Lys Pro Ile Gln Leu
725 1125 1130 1135
727 Ser Gly Glu Ala Leu Asp Pro Leu Phe Met Asp Pro Asp Leu Ala Tyr
728 1140 1145 1150
730 Gly Thr Tyr Thr Gly Ser Cys Gly His Val Met His Ala Val Cys Trp
731 1155 1160 1165
733 Gln Lys Tyr Phe Glu Ala Val Gln Leu Ser Ser Gln Gln Arg Ile His
734 1170 1175 1180
736 Val Asp Leu Phe Asp Leu Glu Ser Gly Glu Tyr Leu Cys Pro Leu Cys
E--> 737 185 1185 1190 1195 1200
739 Lys Ser Leu Cys Asn Thr Val Ile Pro Ile Ile Pro Leu Gln Pro Gln
740 1205 1210 1215
742 Lys Ile Asn Ser Glu Asn Ala Asp Ala Leu Ala Gln Leu Leu Thr Leu
743 1220 1225 1230
745 Ala Arg Itp Ile Gln Thr Val Leu Ala Arg Ile Ser Gly Tyr Asn Ile
746 1235 1240 1245
748 Arg His Ala Lys Gly Glu Asn Pro Ile Pro Ile Phe Phe Asn Gln Gly
749 1250 1255 1260
751 Met Gly Asp Ser Thr Leu Glu Phe His Ser Ile Leu Ser Phe Gly Val
E--> 752 265 1265 1270 1275 1280
754 Glu Ser Ser Ile Lys Tyr Ser Asn Ser Ile Lys Glu Met Val Ile Leu
755 1285 1290 1295
757 Phe Ala Thr Thr Ile Tyr Arg Ile Gly Leu Lys Val Pro Pro Asp Glu
758 1300 1305 1310
760 Arg Asp Pro Arg Val Pro Met Leu Thr Trp Ser Thr Cys Ala Phe Thr
761 1315 1320 1325
763 Ile Gln Ala Ile Glu Asn Leu Leu Gly Asp Glu Gly Lys Pro Leu Phe
764 1330 1335 1340
766 Gln Ala Leu Gln Asn Arg Gln His Asn Gly Leu Lys Ala Leu Met Gln
E--> 767 345 1345 1350 1355 1360
769 Phe Ala Val Ala Gln Arg Ile Thr Cys Pro Gln Val Leu Ile Gln Lys
770 1365 1370 1375
772 His Leu Val Arg Leu Leu Ser Val Val Leu Pro Asn Ile Lys Ser Glu
773 1380 1385 1390
775 Asp Thr Pro Cys Leu Leu Ser Ile Asp Leu Phe His Val Leu Val Gly

When numbering
the first amino
acid on a line,
begin numbers under
first letter of amino
acid, e.g. Ala
1025 [space]

Please leave a space
firsts between last
number and first
letter of following
amino acid. Do
not let numbers
"run into" next
amino acid

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/724,126

DATE: 12/07/2000
TIME: 07:57:13

Input Set : A:\35966aseq.txt
Output Set: N:\CRF3\12072000\I724126.raw

776 1395 1400 1405
778 Ala Val Leu Ala Phe Pro Ser Leu Tyr Trp Asp Asp Pro Val Asp Leu
779 1410 1415 1420
781 Cys Pro Ser Ser Val Ser Ser Ser Tyr Asn His Leu Tyr Leu Phe His
E--> 782 425 1430 1435 1440
784 Leu Ile Thr Met Ala His Met Leu Cys Ile Leu Leu Ile Val Asp Ile
785 1445 1450 1455
787 Gly Leu Pro Leu Ala Cys Val Cys Glu Asp Ser Cys Glu Ala His Ser
788 1460 1465 1470
789 Ala Ser Ser Phe Phe Ala Cys Ile Ser Cys Tyr Ile Ser Gly Ser Ile
791 1475 1480 1485
793 Gly Cys Asp Ile Pro Gly Trp Ile Trp Val Ser Leu Lys Asn Gly
794 1490 1495 1500
796 Leu Thr Pro Tyr Leu Arg Cys Ala Ala Leu Phe Phe His Tyr Leu Leu
E--> 797 505 1510 1515 1520
799 Gly Val Thr Pro Pro Glu Glu Leu His Thr Asn Ser Ala Glu Gly Glu
800 1525 1530 1535
802 Tyr Ser Ala Leu Cys Ser Tyr Leu Ser Leu Pro Thr Asn Leu Phe Leu
803 1540 1545 1550
805 Leu Phe Cys Glu Tyr Trp Asp Thr Val Arg Pro Leu Leu Cys Arg Trp
806 1555 1560 1565
808 Cys Ala Asp Pro Ala Leu Leu Asn Cys Leu Lys Cys Lys Asn Thr Val
809 1570 1575 1580
811 Val Arg Tyr Pro Arg Lys Arg Asn Ser Leu Ile Glu Leu Pro Asp Asp
E--> 812 585 1590 1595 1600
814 Tyr Ser Cys Leu Leu Asn Cys Ala Ser His Phe Arg Cys Pro Arg Ser
815 1605 1610 1615
817 Ala Asp Asp Glu Arg Lys His Pro Val Leu Cys Leu Phe Cys Gly Ala
818 1620 1625 1630
820 Ile Leu Cys Ser Cys Asn Ile Cys Cys Glu Glu Ile Val Asn Gly Glu
821 1635 1640 1645
823 Glu Val Gly Ala Cys Ile Phe His Ala Leu His Cys Gly Ala Gly Val
824 1650 1655 1660
826 Cys Ile Phe Leu Lys Ile Arg Glu Cys Arg Val Val Leu Val Cys Gly
E--> 827 665 1670 1675 1680
829 Lys Ala Arg Gly Cys Ala Tyr Pro Ala Pro Tyr Leu Asp Glu Tyr Gly
830 1685 1690 1695
832 Glu Thr Asp Pro Gly Leu Lys Arg Gly Asn Pro Leu His Leu Ser Arg
833 1700 1705 1710
835 Glu Arg Tyr Arg Lys Leu His Leu Val Trp Cys Glu His Cys Ile Ile
836 1715 1720 1725
838 Glu Glu Ile Ala Arg Ser Cys Glu Thr Asn Cys Met Leu Phe Gly Phe
839 1730 1735 1740
841 Trp Gln Leu Leu
E--> 842 745
1335 <210> SEQ ID NO: 4
1336 <211> LENGTH: 1755
1337 <212> TYPE: PRT
1338 <213> ORGANISM: Homo sapiens

PP.8-10

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/724,126

DATE: 12/07/2000

TIME: 07:57:43

Input Set : A:\35966aseq.txt

Output Set: N:\CRF3\12072000\1724126.raw

1340 <400> SEQUENCE: 4
 1341 Met Ala Ser Glu Leu Glu Pro Glu Val Gln Ala Ile Asp Arg Ser Leu
 1342 1 5 10 15
 1344 Leu Glu Cys Ser Ala Glu Glu Ile Ala Gly Lys Trp Leu Gln Ala Thr
 1345 20 25 30
 1347 Asp Leu Ile Arg Glu Val Tyr Gln His Leu Ala His Tyr Val Pro Lys
 1348 25 40 45
 1350 Ile Tyr Cys Arg Gly Pro Asn Pro Phe Pro Gln Lys Glu Asp Met Leu
 1351 50 55 60
 1353 Ala Gln His Val Leu Leu Gly Pro Met Glu Trp Tyr Leu Cys Gly Glu
 1354 65 70 75 80
 1356 Asp Pro Ala Phe Gly Phe Pro Lys Leu Glu Gln Ala Asn Lys Pro Ser
 1357 85 90 95
 1359 His Leu Cys Gly Arg Val Phe Lys Val Gly Glu Pro Thr Tyr Ser Cys
 1360 100 105 110
 1362 Arg Asp Cys Ala Val Asp Pro Ile Cys Val Leu Cys Met Glu Cys Phe
 1363 115 120 125
 1365 Leu Gly Ser Ile His Arg Asp His Arg Tyr Arg Met Thr Thr Ser Gly
 1366 130 135 140
 1368 Gly Gly Gly Phe Cys Asp Cys Gly Asp Thr Glu Ala Trp Lys Glu Gly
 1369 145 150 155 160
 1371 Pro Tyr Cys Gln Lys His Glu Leu Asn Thr Ser Glu Ile Glu Glu Glu
 1372 165 170 175
 1374 Glu Asp Pro Leu Val His Leu Ser Glu Asp Val Ile Ala Arg Thr Tyr
 1375 180 185 190
 1377 Asn Ile Phe Ala Ile Thr Phe Arg Tyr Ala Val Glu Ile Leu Thr Trp
 1378 195 200 205
 1380 Glu Lys Glu Ser Glu Leu Pro Ala Asp Leu Glu Met Val Glu Lys Ser
 1381 210 215 220
 1383 Asp Ile Tyr Tyr Cys Met Leu Phe Asn Asp Glu Val His Ile Tyr Glu
 1384 225 230 235 240
 1386 Gln Val Ile Tyr Ile Leu Gln Lys Ala Val Asn Cys Thr Gln Lys Glu
 1387 245 250 255
 1389 Ala Ile Gly Phe Ala Thr Thr Val Asp Arg Asp Gly Arg Arg Ser Val
 1390 260 265 270
 1392 Arg Tyr Gly Asp Phe Gln Tyr Cys Glu Gln Ala Lys Ser Val Ile Val
 1393 275 280 285
 1395 Arg Asn Thr Ser Arg Gln Ile Lys Pro Leu Lys Val Gln Val Met His
 1396 290 295 300
 1398 Ser Ser Ile Val Ala His Gln Asn Phe Gly Leu Lys Leu Leu Ser Trp
 1399 305 310 315 320
 1401 Leu Gly Ser Ile Ile Gly Tyr Ser Asp Gly Leu Arg Arg Ile Leu Cys
 1402 325 330 335
 1404 Gln Val Gly Leu Gln Glu Gly Pro Asp Gly Glu Asn Ser Ser Leu Val
 1405 340 345 350
 1407 Asp Arg Leu Met Leu Ser Asp Ser Lys Leu Trp Lys Gly Ala Arg Ser
 1408 355 360 365
 1410 Val Tyr His Gln Leu Phe Met Ser Ser Leu Leu Met Asp Leu Lys Tyr
 1411 370 375 380

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/724,126

DATE: 12/07/2000

TIME: 07:57:43

Input Set : A:\35966aseq.txt

Output Set: N:\CRF3\12072000\I724126.raw

1413 Lys Lys Leu Phe Ala Val Arg Phe Ala Lys Asn Tyr Gln Gln Leu Gln
 1414 385 390 395 400
 1415 Arg Asp Phe Met Glu Asp Asp His Glu Ala Ala Val Ser Val Thr Ala
 1417 405 410 415
 1418 Leu Ser Val Gln Phe Phe Thr Ala Pro Thr Leu Ala Arg Met Leu Ile
 1420 420 425 430
 1422 Thr Glu Glu Asn Leu Ser Ser Ile Ile Lys Thr Phe Met Asp His
 1423 435 440 445
 1425 Leu Arg His Arg Asp Ala Gln Gly Arg Phe Gln Phe Glu Arg Tyr Thr
 1426 450 455 460
 1428 Ala Leu Gln Ala Phe Lys Phe Arg Arg Val Gln Ser Leu Ile Leu Asp
 1429 465 470 475 480
 1431 Leu Lys Tyr Val Leu Ile Ser Lys Pro Thr Glu Trp Ser Asp Glu Leu
 1432 485 490 495
 1434 Arg Gln Lys Phe Leu Glu Gly Phe Asp Ala Phe Leu Glu Leu Leu Lys
 1435 500 505 510
 1437 Cys Met Gln Gly Met Asp Pro Ile Thr Arg Gln Val Gly Gln His Ile
 1438 515 520 525
 1440 Glu Met Glu Pro Glu Trp Glu Ala Ala Phe Thr Leu Glu Met Lys Leu
 1441 530 535 540
 1443 Thr His Val Ile Ser Met Met Gln Asp Trp Cys Ala Ser Asp Glu Lys
 1444 545 550 555 560
 1446 Val Leu Ile Glu Ala Tyr Lys Lys Cys Leu Ala Val Leu Met Gln Cys
 1447 565 570 575
 1449 His Gly Gly Tyr Thr Asp Gly Glu Gln Pro Ile Thr Leu Ser Ile Cys
 1450 580 585 590
 1452 Gly His Ser Val Glu Thr Ile Arg Tyr Cys Val Ser Gln Glu Lys Val
 1453 595 600 605
 1455 Ser Ile His Leu Pro Val Ser Arg Leu Leu Ala Gly Leu His Val Leu
 1456 610 615 620
 1458 Leu Ser Lys Ser Glu Val Ala Tyr Lys Phe Pro Glu Leu Leu Pro Leu
 1459 625 630 635 640
 1461 Ser Glu Leu Ser Pro Pro Met Leu Ile Glu His Pro Leu Arg Cys Leu
 1462 645 650 655
 1464 Val Leu Cys Ala Gln Val His Ala Gly Met Trp Arg Arg Asn Gly Phe
 1465 660 665 670
 1467 Ser Leu Val Asn Gln Ile Tyr Tyr His Asn Val Lys Cys Arg Arg
 1468 675 680 685
 1470 Glu Met Phe Asp Lys Asp Val Val Met Leu Glu Thr Gly Val Ser Met
 1471 690 695 700
 1473 Met Asp Pro Asn His Phe Leu Met Ile Met Leu Ser Arg Phe Glu Leu
 1474 705 710 715 720
 1476 Tyr Gln Ile Phe Ser Thr Pro Asp Tyr Gly Lys Arg Phe Ser Ser Glu
 1477 725 730 735
 1479 Ile Thr His Lys Asp Val Val Gln Gln Asn Asn Thr Leu Ile Glu Glu
 1480 740 745 750
 1482 Met Leu Tyr Leu Ile Ile Met Leu Val Gly Glu Arg Phe Ser Pro Gly
 1483 755 760 765
 1485 Val Gly Gln Val Asn Ala Thr Asp Glu Ile Lys Arg Glu Ile Ile His

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/724,126

DATE: 12/07/2000
TIME: 07:57:43

Input Set : A:\35966aseq.txt
Output Set: N:\CRF3\12072000\I724126.raw

1486 770 775 780
1488 Glu Leu Ser Ile Lys Pro Met Ala His Ser Glu Leu Val Lys Ser Leu
1489 785 790 795 800
1491 Pro Glu Asp Glu Asn Lys Glu Thr Gly Met Glu Ser Val Ile Glu Ala
1492 805 810 815
1494 Val Ala His Phe Lys Lys Pro Gly Leu Thr Gly Arg Gly Met Tyr Glu
1495 820 825 830
1497 Leu Lys Pro Glu Cys Ala Lys Glu Phe Asn Leu Tyr Phe Tyr His Phe
1498 835 840 845
1500 Ser Arg Ala Glu Glu Ser Lys Ala Glu Glu Ala Gln Arg Lys Leu Lys
1501 850 855 860
1503 Arg Glu Asn Arg Glu Asp Thr Ala Leu Pro Pro Pro Val Leu Pro Pro
1504 865 870 875 880
1506 Phe Cys Pro Leu Phe Ala Ser Leu Val Asn Ile Leu Gln Ser Asp Val
1507 885 890 895
1509 Met Leu Cys Ile Met Gly Thr Ile Leu Gln Trp Ala Val Gln His Asn
1510 900 905 910
1512 Gln Tyr Ala Trp Ser Glu Ser Met Leu Gln Arg Val Leu His Leu Ile
1513 915 920 925
1515 Gln Met Ala Leu Gln Glu Lys Gln His Leu Glu Asn Val Thr Glu
1516 930 935 940
1518 Glu His Val Val Thr Phe Thr Gln Lys Ile Ser Lys Pro Gly
1519 945 950 955 960
1521 Gln Ala Pro Lys Asn Ser Pro Ser Ile Leu Ala Met Leu Glu Thr Leu
1522 965 970 975
1524 Gln Asn Ala Pro Tyr Leu Glu Val His Lys Asp Met Ile Arg Trp Ile
1525 980 985 990
1527 Leu Lys Thr Phe Asn Ala Val Lys Lys Met Arg Glu Ser Ser Pro Thr
1528 995 1000 1005
1530 Ser Pro Val Ala Glu Thr Gln Gly Thr Ile Met Gln Glu Ser Ser Arg
1531 1010 1015 1020
1533 Asp Lys Asp Lys Ala Glu Arg Lys Arg Lys Ala Glu Ile Ala Arg Leu
E--> 1534 1025 1030 1035 1040
1536 Arg Arg Glu Lys Ile Met Ala Gln Met Ser Gln Met Gln Arg His Phe
1537 1045 1050 1055
1539 Ile Asp Glu Asn Lys Glu Leu Phe Gln Gln Thr Leu Glu Leu Asp Ala
1540 1060 1065 1070
1542 Ser Thr Ser Ala Val Leu Asp His Ser Pro Val Ala Ser Asp Met Thr
1543 1075 1080 1085
1545 Leu Thr Ala Leu Gln Pro Thr Gln Thr Gln Val Pro Gln Gln Arg Gln
1546 1090 1095 1100
1548 Phe Val Thr Cys Ile Leu Cys Gln Glu Glu Gln Glu Val Lys Val Gln
E--> 1549 105 1110 1115 1120
1551 Ser Arg Ala Met Val Leu Ala Ala Phe Val Gln Arg Ser Thr Val Leu
1552 1125 1130 1135
1554 Ser Lys Asn Arg Ser Lys Phe Ile Gln Asp Pro Gln Iys Tyr Asp Pro
1555 1140 1145 1150
1557 Leu Phe Met His Pro Asp Leu Ser Cys Gly Thr His Thr Ser Ser Cys
1558 1155 1160 1165

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/724,126

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Input Set : A:\35966aseq.txt

Output Set: N:\CRF3\12072000\I724126.raw

1560 Gly His Ile Met His Ala His Cys Trp Gln Arg Iyr Phe Asp Ser Val
 1561 1170 1175 1180
 1563 Cys Ala Lys Glu Gln Arg Arg Gln Gln Arg Leu Arg Leu His Ihr Ser
 E--> 1564 185 1190 1195 1200
 1566 Tyr Asp Val Glu Asn Gly Glu Phe Leu Cys Pro Leu Cys Gln Cys Leu
 1567 1205 1210 1215
 1569 Ser Asn Ihr Val Ile Pro Leu Leu Pro Pro Arg Asn Ile Phe Asn
 1570 1220 1225 1230
 1572 Asn Arg Leu Asn Phe Ser Asp Cln Pro Asn Leu Thr Gln Iyr Ile Arg
 1573 1235 1240 1245
 1575 Thr Ile Ser Gln Gln Ile Lys Ala Leu Gln Phe Leu Arg Lys Gln Gln
 1576 1250 1255 1260
 1578 Ser Thr Pro Asn Asn Ala Ser Thr Lys Asn Ser Glu Asn Val Asp Glu
 E--> 1579 265 1270 1275 1280
 1581 Leu Gln Leu Pro Glu Gly Phe Arg Pro Asp Phe Arg Pro Lys Ile Pro
 1582 1285 1290 1295
 1584 Tyr Ser Glu Ser Ile Lys Gln Met Leu Thr Thr Phe Gly Ihr Ala Ihr
 1585 1300 1305 1310
 1587 Tyr Lys Val Gly Leu Lys Val His Pro Asn Glu Glu Asp Pro Arg Val
 1588 1315 1320 1325
 1590 Pro Ile Met Cys Trp Gly Ser Cys Ala Tyr Thr Ile Gln Ser Ile Gln
 1591 1330 1335 1340
 1593 Ile Leu Ser Asp Glu Asp Lys Pro Leu Phe Gly Pro Leu Pro Cys
 E--> 1594 345 1350 1355 1360
 1596 Arg Leu Asp Asp Cys Leu Arg Ser Leu Thr Arg Phe Ala Ala Ala His
 1597 1365 1370 1375
 1599 Trp Ihr Val Ala Ser Val Ser Val Val Gln Gly His Phe Cys Lys Leu
 1600 1380 1385 1390
 1602 Phe Ala Ser Leu Val Pro Asn Asp Ser His Glu Glu Leu Pro Cys Ile
 1603 1395 1400 1405
 1605 Leu Asp Ile Asp Met Phe His Leu Leu Val Gln Leu Val Leu Ala Phe
 1606 1410 1415 1420
 1608 Pro Ala Leu Gln Cys Gln Asp Phe Ser Gly Ile Ser Leu Gly Thr Gly
 E--> 1609 425 1430 1435 1440
 1611 Asp Leu His Ile Phe His Leu Val Thr Met Ala His Ile Ile Gln Ile
 1612 1445 1450 1455
 1614 Leu Leu Thr Ser Cys Thr Glu Glu Asn Gly Met Asp Gln Glu Asn Pro
 1615 1460 1465 1470
 1617 Pro Cys Gln Glu Glu Ser Ala Val Leu Ala Leu Tyr Lys Thr Leu His
 1618 1475 1480 1485
 1620 Gln Iyr Thr Gly Ser Ala Leu Lys Glu Ile Pro Ser Gly Trp His Leu
 1621 1490 1495 1500
 1623 Arg Ser Val Arg Ala Gly Ile Met Pro Phe Leu Lys Cys Ser Ala
 E--> 1624 507 1510 1515 1520
 1626 Leu Phe Phe His Tyr Leu Asn Gly Val Pro Ser Pro Asp Ile Gln
 1627 1525 1530 1535
 1629 Val Pro Gly Thr Ser His Phe Glu His Leu Cys Ser Tyr Leu Ser Leu
 1630 1540 1545 1550
 1632 Pro Asn Asn Leu Ile Cys Leu Phe Gln Glu Asn Ser Glu Ile Met Asn

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/724,126

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Input Set : A:\35966aseq.txt

Output Set: N:\CRF3\12072000\I724126.raw

1633 1555 1560 1565
 1635 Ser Leu Ile Glu Ser Itp Cys Arg Asn Ser Glu Val Lys Arg Tyr Leu
 1636 1570 1575 1580
 1639 Glu Gly Glu Arg Asp Ala Ile Arg Tyr Pro Ala Glu Ser Asn Lys Ieu
 E--> 1639 585 1590 1595 1600
 1641 Asn Leu Pro Cys Asp Tyr Ser Ser Leu Ile Asn Gln Ala Ser Asn
 1642 1605 1610 1615
 1642 Phe Ser Cys Pro Lys Ser Gly Cys Asp Lys Ser Arg Ala Pro Thr Leu
 1643 1620 1625 1630
 1643 Cys Leu Val Cys Gly Ser Leu Leu Cys Ser Gln Ser Tyr Cys Cys Gln
 1643 1635 1640 1645
 1650 Thr Glu Leu Glu Gly Glu Asp Val Gly Ala Cys Thr Ala His Thr Tyr
 1651 1650 1655 1660
 1653 Cys Gly Ser Gly Val Gly Thr Phe Leu Arg Val Arg Cys Cys Gln
 E--> 1653 665 1670 1675 1680
 1655 Val Leu Phe Leu Ala Gly Lys Thr Lys Gly Cys Phe Tyr Ser Pro Pro
 1657 1685 1690 1695
 1659 Tyr Leu Asp Asp Tyr Gly Gln Thr Asp Gln Gly Leu Arg Arg Gly Asn
 1660 1700 1705 1710
 1662 Pro Leu His Leu Cys Lys Glu Arg Phe Lys Lys Ile Gln Lys Leu Itp
 1663 1715 1720 1725
 1665 HIS Gln His Ser Val Thr Glu Glu Ile Gly His Ala Gln Glu Ala Asn
 1666 1720 1735 1740
 1668 Gln Itp Leu Val Gly Ile Asp Itp Gln His Leu
 E--> 1668 745 1750 1755
 2154 <210> SEQ ID NO: 6
 2155 <211> LENGTH: 1755
 2156 <212> TYPE: PRT
 2157 <213> ORGANISM: Mouse
 2158 <400> SEQUENCE: 6
 PR. 13-5
 2160 Met Ala Ser Glu Met Glu Pro Glu Val Gln Ala Ile Asp Arg Ser Leu
 2161 1 5 10 15
 2163 Leu Glu Cys Ser Ala Glu Glu Ile Ala Gly Arg Itp Leu Gln Ala Thr
 2164 20 25 30
 2166 Asp Leu Asn Arg Glu Val Tyr Gln His Leu Ala His Cys Val Pro Lys
 2167 35 40 45
 2169 Ile Tyr Cys Arg Gly Pro Asn Pro Phe Pro Gln Lys Glu Asp Thr Leu
 2170 50 55 60
 2172 Ala Gln His Ile Leu Leu Gly Pro Met Glu Itp Tyr Ile Cys Ala Glu
 2173 65 70 75 80
 2175 Asp Pro Ala Leu Gly Phe Pro Lys Leu Glu Gln Ala Asn Lys Pro Ser
 2176 85 90 95
 2178 His Leu Cys Gly Arg Val Phe Lys Val Gly Glu Pro Thr Tyr Ser Cys
 2179 100 105 110
 2181 Arg Asp Cys Ala Val Asp Pro Thr Cys Val Leu Cys Met Glu Cys Phe
 2182 115 120 125
 2184 Leu Gly Ser Ile His Arg Asp His Arg Tyr Arg Met Thr Thr Ser Gly
 2185 130 135 140
 2187 Gly Gly Gly Phe Cys Asp Cys Gly Asp Thr Glu Ala Itp Lys Glu Gly

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/724,126
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Input Set : A:\35966aseq.txt
Output Set: N:\CRF3\12072000\I724126.raw

| | | | | |
|------|---|-----|-----|-----|
| 2188 | 145 | 150 | 155 | 160 |
| 2190 | Pro Tyr Cys Gln Lys His Lys Leu Ser Ser Ser Gln Val Val Glu Glu | | | |
| 2191 | 165 | 170 | 175 | |
| 2193 | Glu Asp Pro Ile Val His Leu Ser Glu Asp Val Ile Ala Arg Thr Tyr | | | |
| 2194 | 180 | 185 | 190 | |
| 2196 | Asn Ile Phe Ala Ile Met Phe Arg Tyr Ala Val Asp Ile Leu Thr Itp | | | |
| 2197 | 195 | 200 | 205 | |
| 2199 | Glu Lys Glu Ser Glu Leu Pro Glu Asp Leu Glu Val Ala Glu Lys Ser | | | |
| 2200 | 210 | 215 | 220 | |
| 2202 | Asp Thr Tyr Tyr Cys Met Leu Phe Asn Asp Glu Val His Thr Tyr Glu | | | |
| 2203 | 225 | 230 | 235 | 240 |
| 2205 | Gln Val Ile Tyr Thr Leu Gln Lys Ala Val Asn Cys Thr Gln Lys Glu | | | |
| 2206 | 245 | 250 | 255 | |
| 2208 | Ala Ile Gly Phe Ala Thr Thr Val Asp Arg Asp Gly Arg Arg Pro Val | | | |
| 2209 | 260 | 265 | 270 | |
| 2211 | Arg Tyr Gly Asp Phe Gln Tyr Cys Asp Gln Ala Lys Thr Val Ile Val | | | |
| 2212 | 275 | 280 | 285 | |
| 2214 | Arg Asn Thr Ser Arg Gln Thr Lys Pro Leu Lys Val Gln Val Met His | | | |
| 2215 | 290 | 295 | 300 | |
| 2217 | Ser Ser Val Ala Ala His Gln Asn Phe Gly Leu Lys Ala Leu Ser Itp | | | |
| 2218 | 305 | 310 | 315 | 320 |
| 2220 | Leu Gly Ser Val Ile Gly Tyr Ser Asp Gly Leu Arg Arg Ile Leu Cys | | | |
| 2221 | 325 | 330 | 335 | |
| 2223 | Gln Val Gly Leu Gln Glu Gly Pro Asp Gly Gln Asn Ser Ser Leu Val | | | |
| 2224 | 340 | 345 | 350 | |
| 2226 | Asp Arg Leu Met Leu Asn Asp Ser Lys Leu Itp Lys GLy Ala Arg Ser | | | |
| 2227 | 355 | 360 | 365 | |
| 2229 | Val Tyr His Gln Leu Phe Met Ser Ser Leu Leu Met Asp Leu Lys Tyr | | | |
| 2230 | 370 | 375 | 380 | |
| 2232 | Lys Lys Leu Phe Ala Leu Arg Phe Ala Lys Asn Tyr Arg Gln Leu Gln | | | |
| 2233 | 385 | 390 | 395 | 400 |
| 2235 | Arg Asp Phe Met Glu Asp Asp His Glu Arg Ala Val Ser Val Thr Ala | | | |
| 2236 | 405 | 410 | 415 | |
| 2238 | Leu Ser Val Gln Phe Phe Thr Ala Pro Thr Leu Ala Arg Met Leu Leu | | | |
| 2239 | 420 | 425 | 430 | |
| 2241 | Thr Glu Glu Asn Leu Met Thr Val Ile Ile Lys Ala Phe Met Asp His | | | |
| 2242 | 435 | 440 | 445 | |
| 2244 | Leu Lys His Arg Asp Ala Gln Gly Arg Phe Gln Phe Glu Arg Tyr Thr | | | |
| 2245 | 450 | 455 | 460 | |
| 2247 | Ala Leu Gln Ala Phe Lys Phe Arg Arg Val Gln Ser Leu Ile Leu Asp | | | |
| 2248 | 465 | 470 | 475 | 480 |
| 2250 | Leu Lys Tyr Val Leu Ile Ser Lys Pro Thr Glu Itp Ser Asp Glu Leu | | | |
| 2251 | 485 | 490 | 495 | |
| 2253 | Arg Gln Lys Phe Leu Gln Gly Phe Asp Ala Phe Leu Glu Leu Leu Lys | | | |
| 2254 | 500 | 505 | 510 | |
| 2256 | Cys Met Gln Gly Met Asp Pro Ile Thr Arg Gln Val Gly Gln His Ile | | | |
| 2257 | 515 | 520 | 525 | |
| 2259 | Glu Met Glu Pro Glu Itp Glu Ala Ala Phe Thr Leu Gln Met Lys Leu | | | |
| 2260 | 530 | 535 | 540 | |

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/724,126

DATE: 12/05/2000

TIME: 07:57:43

Input Set : A:\35966aseq.txt

Output Set: N:\CRF3\12072000\I724126.raw

2262 Ile His Val Ile Ser Met Val Gln Asp Trp Cys Ala Leu Asp Glu Lys
 2263 545 550 555 560
 2263 Val Leu Ile Glu Ala Tyr Lys Lys Cys Leu Ala Val Leu Thr Glu Cys
 2266 565 570 575
 2268 His Gly Gly Phe Ile Asp Gly Glu Pro Ile Ile Leu Ser Ile Cys
 2269 580 585 590
 2271 Gly His Ser Val Glu Ile Ile Arg Tyr Cys Val Ser Gln Glu Lys Val
 2272 595 600 605
 2274 Ser Ile His Leu Pro Ile Ser Arg Leu Leu Ala Gly Leu His Val Leu
 2275 610 615 620
 2277 Leu Ser Lys Ser Glu Val Ala Tyr Lys Phe Pro Glu Leu Leu Pro Leu
 2278 625 630 635 640
 2280 Ser Glu Leu Ser Pro Pro Met Leu Ile Glu His Pro Leu Arg Cys Leu
 2281 645 650 655
 2283 Val Leu Cys Ala Gln Val His Ala Gly Met Trp Arg Arg Asn Gly Phe
 2284 660 665 670
 2285 Ser Leu Val Asn Gln Ile Tyr Tyr His Asn Val Lys Cys Arg Arg
 2287 675 680 685
 2289 Gln Met Phe Asp Lys Asp Ile Val Met Leu Gln Thr Gly Val Ser Met
 2290 690 695 700
 2292 Met Asp Pro Asn His Phe Leu Met Ile Met Leu Ser Arg Phe Glu Leu
 2293 705 710 715 720
 2295 Tyr Gln Leu Phe Ser Thr Pro Asp Tyr Gly Lys Arg Phe Ser Ser Glu
 2296 725 730 735
 2298 Val Thr His Lys Asp Val Val Gln Asn Asn Thr Leu Ile Glu Glu
 2299 740 745 750
 2301 Met Leu Tyr Leu Ile Ile Met Leu Val Gly Glu Arg Phe Asn Pro Gly
 2302 755 760 765
 2304 Val Gly Gln Val Ala Ala Thr Asp Glu Ile Lys Arg Gln Ile Ile His
 2305 770 775 780
 2307 Gln Leu Ser Ile Lys Pro Met Ala His Ser Gln Leu Val Lys Ser Leu
 2308 785 790 795 800
 2310 Pro Glu Asp Gln Asn Lys Glu Thr Gly Met Glu Ser Val Ile Gln Ser
 2311 805 810 815
 2313 Val Ala His Phe Lys Lys Pro Gly Leu Thr Gly Arg Gly Met Tyr Glu
 2314 820 825 830
 2316 Leu Lys Pro Glu Cys Ala Lys Glu Phe Asn Leu Tyr Phe Tyr His Phe
 2317 835 840 845
 2319 Ser Arg Ala Glu Gln Ser Lys Ala Glu Glu Ala Gln Arg Lys Leu Lys
 2320 850 855 860
 2322 Arg Glu Asn Lys Glu Asp Thr Ala Leu Pro Pro Ala Leu Pro Pro
 2323 865 870 875 880
 2325 Phe Cys Pro Leu Phe Ala Ser Leu Val Asn Ile Leu Gln Cys Asp Val
 2326 885 890 895
 2328 Met Leu Tyr Ile Met Gly Thr Ile Leu Gln Trp Ala Val Glu His His
 2329 900 905 910
 2331 Gly Ser Ala Trp Ser Gln Ser Met Leu Gln Arg Val Leu His Leu Ile
 2332 915 920 925
 2334 Gly Met Ala Leu Gln Glu Lys His His Leu Glu Asn Ala Val Glu

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/724,126

DATE: 12/07/2000
TIME: 07:57:13

Input Set : A:\35966aseq.txt
Output Set: N:\CRF3\12072000\I724126.raw

2335 930 935 940
2337 Gly His Val Gln Thr Phe Thr Phe Gln Lys Ile Ser Lys Pro Gly
2338 945 950 955 960
2340 Asp Ala Pro His Asn Ser Pro Ser Ile Leu Ala Met Leu Glu Thr Leu
2341 965 970 975
2343 Gln Asn Ala Pro Ser Leu Glu Ala His Lys Asp Met Ile Arg Itp Leu
2344 980 985 990
2346 Leu Lys Met Phe Asn Ala Ile Lys Lys Ile Arg Glu Cys Ser Ser Ser
2347 995 1000 1005
2349 Ser Pro Val Ala Glu Ala Gly Thr Ile Met Gln Gln Ser Ser Arg
2350 1010 1015 1020
2352 Asp Lys Asp Lys Ala Glu Arg Lys Ala Glu Ile Ala Arg Leu
E--> 2351 025 1030 1035 1040
2353 Arg Arg Glu Lys Ile Met Ala Gln Met Ser Glu Met Gln Arg His Phe
2356 1045 1050 1055
2358 Ile Asp Glu Asn Lys Glu Leu Phe Gln Gln Thr Leu Glu Leu Asp Thr
2359 1060 1065 1070
2361 Ser Ala Ser Ala Thr Leu Asp Ser Ser Pro Pro Val Ser Asp Ala Ala
2362 1075 1080 1085
2364 Leu Thr Ala Leu Gly Pro Ala Gln Thr Gln Val Pro Glu Pro Arg Gln
2365 1090 1095 1100
2367 Phe Val Thr Cys Ile Leu Cys Gln Glu Gln Gln Val Thr Val Gly
E--> 2368 105 1110 1115 1120
2370 Ser Arg Ala Met Val Leu Ala Ala Phe Val Gln Arg Ser Thr Val Leu
2371 1125 1130 1135
2373 Ser Lys Asp Arg Thr Lys Thr Ile Ala Asp Pro Glu Lys Tyr Asp Pro
2374 1140 1145 1150
2376 Leu Phe Met His Pro Asp Leu Ser Cys Gly Thr His Thr Gly Ser Cys
2377 1155 1160 1165
2379 Gly His Val Met His Ala His Cys Itp Gln Arg Tyr Phe Asp Ser Val
2380 1170 1175 1180
2382 Gln Ala Lys Glu Glu Arg Arg Gln Arg Leu Arg Leu His Thr Ser
E--> 2383 185 1190 1195 1200
2385 Tyr Asp Val Glu Asn Gly Glu Phe Leu Cys Pro Leu Cys Glu Cys Leu
2386 1205 1210 1215
2388 Ser Asn Thr Val Ile Pro Leu Leu Leu Pro Pro Arg Ser Ile Leu Ser
2389 1220 1225 1230
2391 Arg Arg Leu Asn Phe Ser Asp Gln Pro Asp Leu Ala Gln Itp Thr Arg
2392 1235 1240 1245
2394 Ala Val Thr Gln Gln Ile Lys Val Val Gln Met Leu Arg Arg Lys His
2395 1250 1255 1260
2397 Asn Ala Ala Asp Thr Ser Ser Glu Asp Thr Glu Ala Met Asn Ile
E--> 2398 265 1270 1275 1280
2400 Ile Pro Ile Pro Glu Gly Phe Arg Pro Asp Phe Tyr Pro Arg Asn Phe
2401 1285 1290 1295
2403 Tyr Ser Asp Ser Ile Lys Glu Met Leu Thr Thr Phe Gly Thr Ala Ala
2404 1300 1305 1310
2406 Tyr Lys Val Gly Leu Lys Val His Pro Asn Glu Gly Asp Pro Arg Val
2407 1315 1320 1325

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/724,126DATE: 12/07/2000
TIME: 07:57:43Input Set : A:\35966aseq.txt
Output Set: N:\CRF3\12072000\I724126.raw

2409 Pro Ile Leu Cys Itp Gly Thr Cys Ala Tyr Thr Ile Gln Ser Ile Glu
 2410 1340 1335 1340
 2411 ~~Arg~~ Ile Leu Ser Asp Glu Glu Lys Pro Val Phe Gly Pro Leu Pro Cys
E--> 2413 345 1350 1355 1360
 2415 Arg Leu Asp Asp Cys Leu Arg Ser Leu Thr Arg Phe Ala Ala Ala His
 2416 1365 1379 1375
 2418 Itp Thr Val Ala Leu Leu Pro Val Val Gln Gl; His Phe Cys Lys Leu
 2419 1380 1385 1390
 2421 Phe Ala Ser Ile Val Pro Ser Asp Ser Tyr Glu Asp Leu Pro Cys Ile
 2422 1395 1400 1405
 2424 Leu Asp Ile Asp Met Phe His Leu Leu Val Gly Leu Val Leu Ala Phe
 2425 1410 1415 1420
 2427 Pro Ala Leu Cln Cys Gln Asp Phe Ser Gly Ser Ser Leu Ala Thr Gly
E--> 2428 425 1430 1435 1440
 2430 Itp Leu His Ile Phe His Leu Val Thr Met Ala His Ile Ile Val Gln Ile
 2431 1445 1450 1455
 2433 Leu Leu Thr Ser Cys Thr Glu Glu Asn Gly Met Asp Gln Glu Asn Pro
 2434 1460 1465 1470
 2435 Thr Gly Glu Glu Glu Leu Ala Ile Leu Ser Leu His Lys Thr Leu His
 2437 1475 1480 1485
 2439 Gln Tyr Thr Gly Ser Ala Leu Lys Glu Ala Pro Ser Gly Itp His Leu
 2440 1490 1495 1500
 2442 Arg Ser Val Arg Ala Ala Ile Met Pro Phe Leu Lys Cys Ser Ala
E--> 2443 505 1510 1515 1520
 2445 Asn Phe Phe His Tyr Leu Asn Gly Val Pro Ala Pro Pro Asp Leu Gln
 2446 1525 1530 1535
 2448 Val Ser Gly Thr Ser His Phe Glu His Leu Cys Asn Tyr Leu Ser Leu
 2449 1540 1545 1550
 2451 Pro Thr Asn Leu Ile His Leu Phe Glu Glu Asn Ser Asp Ile Met Asn
 2452 1555 1560 1565
 2454 Ser Leu Ile Glu Ser Itp Cys Gln Asn Ser Glu Val Lys Arg Tyr Leu
 2455 1570 1575 1580
 2457 Asn Gly Glu Arg Gly Ala Ile Ser Tyr Pro Arg Gly Ala Asn Lys Leu
E--> 2458 585 1590 1595 1600
 2460 Ile Asp Leu Pro Glu Asp Tyr Ser Ser Leu Ile Asn Gln Ala Ser Asn
 2461 1605 1610 1615
 2463 Phe Ser Cys Pro Lys Ser Gly Gly Asp Lys Ser Arg Ala Pro Thr Leu
 2464 1620 1625 1630
 2466 Cys Leu Val Cys Gly Ser Leu Leu Cys Ser Gln Ser Tyr Cys Cys Gln
 2467 1635 1640 1645
 2469 Ala Gln Leu Glu Gly Glu Asp Val Gly Ala Cys Thr Ala His Thr Tyr
 2470 1650 1655 1660
 2472 Ser Cys Gly Ser Gly Ala Gln Ile Phe Leu Arg Val Arg Glu Cys Gln
E--> 2473 665 1670 1675 1680
 2475 Val Leu Phe Leu Ala Gly Lys Thr Lys Gly Cys Phe Tyr Ser Pro Pro
 2476 1685 1690 1695
 2478 Tyr Leu Asp Asp Tyr Gly Glu Thr Asp Gln Gly Leu Arg Arg Gly Asn
 2479 1700 1705 1710
 2481 Pro Leu His Leu Cys Gln Glu Arg Phe Arg Lys Ile Gln Lys Leu Trp

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TIME: 07:57:43

Input Set : A:\35966aseq.txt

Output Set: N:\CRF3\12072000\I724126.raw

2482 1715 1720 1725
 2484 Gln Gin His Ser Ile Thr Glu Glu Ile Gly His Ala Gin Glu Ala Asn
 2485 1730 1735 1740
 2487 Thr Leu Val Gly Ile Asp Trp Gln His Ieu
 E--> 2488 745 1750 1755
 3133 <210> SEQ ID NO: 19
 3134 <211> LENGTH: 1735
 3135 <212> TYPE: PRI
 3136 <213> ORGANISM: Homo sapiens
 3138 <400> SEQUENCE: 19
 3139 Ala Met Gin Gly Asn Met Ala Asp Glu Gin Ala Gly Gly Thr Glu Arg
 3140 1 5 10 15
 3142 Met Gin Ile Ser Ala Glu Leu Pro Gln Thr Pro Gln Arg Leu Ala Ser
 3143 10 25 30
 3145 Trp Ile Asp Gln Gln Val Asp Phe Tyr Thr Ala Phe Leu His His Leu
 3146 35 40 45
 3148 Ala Gin Leu Val Pro Glu Ile Tyr Phe Ala Glu Met Asp Pro Asp Leu
 3149 50 55 60
 3151 Glu Lys Gln Gin Glu Ser Val Gln Met Ser Ile Phe Thr Pro Leu Glu
 3152 65 70 75 80
 3154 Trp Tyr Leu Phe Gly Glu Asp Pro Asp Ile Cys Leu Glu Lys Leu Lys
 3155 85 90 95
 3157 His Ser Cys Ala Phe Gln Leu Cys Gly Arg Val Phe Lys Ser Gly Glu
 3158 100 105 110
 3160 Thr Thr Tyr Ser Cys Arg Asp Cys Ala Ile Asp Pro Thr Cys Val Leu
 3161 115 120 125
 3163 Cys Met Asp Cys Phe Gln Asp Ser Val His Lys Asn His Arg Tyr Lys
 3164 130 135 140
 3166 Met His Thr Ser Thr Gly Gly Phe Cys Asp Cys Gly Asp Thr Glu
 3167 145 150 155 160
 3169 Ala Trp Lys Thr Gly Pro Phe Cys Val Asn His Glu Pro Gly Arg Ala
 3170 165 170 175
 3172 Gly Thr Ile Lys Glu Asn Ser Arg Cys Pro Leu Asn Glu Glu Val Ile
 3173 180 185 190
 3175 Val Gin Ala Arg Lys Ile Phe Pro Ser Val Ile Lys Tyr Val Val Glu
 3176 195 200 205
 3178 Met Thr Ile Trp Glu Glu Lys Glu Leu Pro Pro Glu Leu Glu Ile
 3179 210 215 220
 3181 Arg Glu Lys Asn Glu Arg Tyr Tyr Cys Val Leu Phe Asn Asp Glu His
 3182 225 230 235 240
 3184 His Ser Tyr Asp His Val Ile Tyr Ser Leu Glu Arg Ala Leu Asp Cys
 3185 245 250 255
 3187 Glu Leu Ala Glu Ala Glu Leu His Thr Thr Ala Ile Asp Lys Cys Gly
 3188 260 265 270
 3190 Arg Arg Ala Val Lys Ala Gly Ala Tyr Ala Ala Cys Glu Glu Ala Lys
 3191 275 280 285
 3193 Gln Asp Ile Lys Ser His Ser Glu Asn Val Ser Gln His Pro Leu His
 3194 290 295 300
 3196 Val Glu Val Leu His Ser Glu Ile Met Ala His Gln Lys Phe Ala Leu

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PATENT APPLICATION: US/09/724,126

DATE: 12/07/2000

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Input Set : A:\35966aseq.txt

Output Set: N:\CRF3\12072000\I724126.raw

| | | | | |
|------|---|-----|-----|-----|
| 3197 | 305 | 310 | 315 | 320 |
| 3199 | Arg Leu Gly Ser Trp Met Asn Lys Ile Met Ser Tyr Ser Ser Asp Phe | | | |
| 3200 | | 325 | 330 | 335 |
| 3202 | Arg Cln Ile Phe Cys Gln Ala Cys Leu Arg Gln Glu Pro Asp Ser Glu | | | |
| 3203 | | 340 | 345 | 350 |
| 3205 | Asn Pro Cys Leu Ile Ser Arg Leu Met Leu Trp Asp Ala Lys Leu Tyr | | | |
| 3206 | | 375 | 360 | 365 |
| 3208 | Lys Cln Ala Arg Lys Ile Leu His Gln Leu Ile Phe Ser Ser Phe Phe | | | |
| 3209 | | 370 | 375 | 380 |
| 3211 | Met Glu Met Cln Tyr Lys Lys Leu Phe Ala Met Glu Phe Val Lys Tyr | | | |
| 3212 | | 385 | 390 | 395 |
| 3214 | Tyr Iys Gln Leu Gln Lys Glu Tyr Ile Ser Asp Asp His Asp Arg Ser | | | |
| 3215 | | 405 | 410 | 415 |
| 3217 | Ile Ser Ile Thr Ala Leu Ser Val Gln Met Phe Thr Val Pro Thr Leu | | | |
| 3218 | | 420 | 425 | 430 |
| 3220 | Ala Arg His Leu Ile Glu Glu Gln Asn Val Ile Ser Val Ile Thr Glu | | | |
| 3221 | | 435 | 440 | 445 |
| 3223 | Thr Leu Leu Glu Val Leu Pro Gln Tyr Leu Asp Arg Asn Asn Lys Phe | | | |
| 3224 | | 450 | 455 | 460 |
| 3226 | Asn Phe Gln Gln Tyr Ser Gln Asp Lys Leu Gly Arg Val Tyr Ala Val | | | |
| 3227 | | 465 | 470 | 475 |
| 3229 | Ile Cys Asp Leu Lys Tyr Ile Leu Ile Ser Lys Pro Thr Ile Trp Thr | | | |
| 3230 | | 485 | 490 | 495 |
| 3232 | Gln Arg Leu Arg Met Gln Phe Leu Gln Gly Phe Arg Ser Phe Leu Lys | | | |
| 3233 | | 500 | 505 | 510 |
| 3235 | Ile Leu Thr Cys Met Gln Gly Met Glu Glu Ile Arg Arg Gln Val Gln | | | |
| 3236 | | 515 | 520 | 525 |
| 3238 | Gln His Ile Glu Val Asp Pro Asp Itp Glu Ala Ala Ile Ala Ile Gln | | | |
| 3239 | | 530 | 535 | 540 |
| 3241 | Met Gln Leu Lys Asn Ile Leu Leu Met Phe Gln Glu Itp Cys Ala Cys | | | |
| 3242 | | 545 | 550 | 555 |
| 3244 | Asp Glu Glu Leu Leu Val Ala Tyr Lys Glu Cys His Lys Ala Val | | | |
| 3245 | | 565 | 570 | 575 |
| 3247 | Met Arg Cys Ser Thr Ser Phe Ile Ser Ser Ser Lys Thr Val Val Gln | | | |
| 3248 | | 580 | 585 | 590 |
| 3250 | Ser Cys Gly His Ser Leu Glu Thr Lys Ser Tyr Arg Val Ser Glu Asp | | | |
| 3251 | | 595 | 600 | 605 |
| 3253 | Leu Val Ser Ile His Leu Pro Leu Ser Arg Thr Leu Ala Gly Leu His | | | |
| 3254 | | 610 | 615 | 620 |
| 3256 | Val Arg Leu Ser Arg Leu Gly Ala Val Ser Arg Leu His Glu Phe Val | | | |
| 3257 | | 625 | 630 | 635 |
| 3259 | Ser Phe Glu Asp Phe Gln Val Glu Val Leu Val Glu Tyr Pro Leu Arg | | | |
| 3260 | | 645 | 650 | 655 |
| 3262 | Cys Leu Val Leu Val Ala Gln Val Val Ala Glu Met Trp Arg Arg Asn | | | |
| 3263 | | 660 | 665 | 670 |
| 3265 | Gly Leu Ser Leu Ile Ser Gln Val Phe Tyr Tyr Gln Asp Val Lys Cys | | | |
| 3266 | | 675 | 680 | 685 |
| 3268 | Arg Glu Glu Met Tyr Asp Lys Asp Ile Ile Met Leu Gln Ile Gly Ala | | | |
| 3269 | | 690 | 695 | 700 |

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/724,126DATE: 12/07/2000
TIME: 07:57:44Input Set : A:\35966aseq.txt
Output Set: N:\CRF3\12072000\I724126.raw

3271 Ser Leu Met Asp Pro Asn Lys Phe Leu Leu Leu Val Leu Gln Arg Tyr
 3272 705 710 715 720
 3274 Glu Leu Ala Glu Ala Phe Asn Lys Thr Ile Ser Thr Lys Asp Gln Asp
 3275 725 730 735
 3277 Leu Ile Lys Cln Tyr Asn Thr Leu Ile Glu Glu Met Leu Sln Val Leu
 3278 740 745 750
 3280 Ile Tyr Ile Val Gly Glu Arg Tyr Val Pro Gly Val Gly Asn Val Thr
 3281 755 760 765
 3283 Lys Glu Glu Val Thr Met Arg Glu Ile Ile His Leu Leu Cys Ile Glu
 3284 770 775 780
 3286 Pro Met Pro His Ser Ala Ile Ala Lys Asn Leu Pro Glu Asn Gln Asn
 3287 785 790 795 800
 3289 Asn Glu Thr Gly Leu Glu Asn Val Ile Asn Lys Val Ala Thr Phe Lys
 3290 805 810 815
 3292 Lys Pro Gly Val Ser Gly His Gly Val Tyr Glu Leu Lys Asp Gln Ser
 3293 820 825 830
 3295 Leu Lys Asp Phe Asn Met Tyr Phe Tyr His Tyr Ser Lys Thr Gln His
 3296 835 840 845
 3298 Ser Lys Ala Glu His Met Gln Lys Lys Arg Arg Lys Gln Glu Asn Lys
 3299 850 855 860
 3301 Asp Glu Ala Leu Pro Pro Pro Pro Pro Glu Phe Cys Pro Ala Phe
 3302 865 870 875 880
 3304 Ser Lys Val Ile Asn Leu Leu Asn Cys Asp Ile Met Met Tyr Ile Leu
 3305 885 890 895
 3307 Arg Thr Val Phe Glu Arg Ala Ile Asp Thr Asp Ser Asn Leu Trp Thr
 3308 900 905 910
 3310 Glu Gly Met Leu Gln Met Ala Phe His Ile Leu Ala Leu Gly Leu Leu
 3311 915 920 925
 3313 Glu Glu Lys Gln Gln Leu Glu Lys Ala Pro Glu Glu Val Thr Phe
 3314 930 935 940
 3316 Asp Phe Tyr His Lys Ala Ser Arg Leu Gly Ser Ser Ala Met Asn Ile
 3317 945 950 955 960
 3319 Gln Met Leu Leu Glu Lys Leu Lys Gly Ile Pro Gln Leu Glu Gly Gln
 3320 965 970 975
 3322 Lys Asp Met Ile Thr Trp Ile Leu Gln Met Phe Asp Thr Val Lys Arg
 3323 980 985 990
 3325 Leu Arg Glu Lys Ser Cys Leu Ile Val Ala Thr Thr Ser Gly Ser Gln
 3326 995 1000 1005
 3328 Ser Ile Lys Asn Asp Glu Ile Thr His Asp Lys Glu Lys Ala Glu Arg
 3329 1010 1015 1020
 3331 Lys Arg Lys Ala Glu Ala Ala Arg Leu His Arg Gln Lys Ile Met Ala
 3332 1025 1030 1035 1040
 3334 Gln Met Ser Ala Leu Glu Lys Asn Phe Ile Glu Thr His Lys Leu Met
 3335 1045 1050 1055
 3337 Tyr Asp Asn Thr Ser Glu Met Pro Gly Lys Glu Asp Ser Ile Met Gln
 3338 1060 1065 1070
 3340 Glu Glu Ser Thr Pro Ala Val Ser Asp Tyr Ser Arg Ile Ala Leu Gly
 3341 1075 1080 1085
 3343 Pro Lys Arg Gly Pro Ser Val Thr Glu Lys Glu Val Leu Thr Cys Ile

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/724,126

DATE: 12/07/2000

TIME: 07:57:14

Input Set : A:\35966aseq.txt

Output Set: N:\CRF3\12072000\I724126.raw

3344 1090 1095 1100
 3346 Leu Cys Gln Gln Gln Glu Val Lys Ile Glu Asn Asn Ala Met Val
 3347 1105 1110 1115 1120
 3349 Leu Ser Ala Cys Val Glu Lys Ser Thr Ala Leu Thr Gln His Arg Gly
 3350 1125 1130 1135
 3352 Lys Pro Ile Glu Leu Ser Gly Glu Ala Leu Asp Pro Leu Phe Met Asp
 3353 1140 1145 1150
 3355 Pro Asp Leu Ala Tyr Gly Thr Tyr Thr Gly Ser Cys Gly His Val Met
 3356 1155 1160 1165
 3358 His Ala Val Cys Itp Gln Lys Tyr Phe Glu Ala Val Gln Leu Ser Ser
 3359 1170 1175 1180
 3361 Gln Gln Arg Ile His Val Asp Leu Phe Asp Leu Glu Ser Gly Glu Tyr
 3362 1185 1190 1195 1200
 3364 Leu Cys Pro Leu Cys Iys Ser Leu Cys Asn Thr Val Ile Pro Ile Ile
 3365 1205 1210 1215
 3367 Pro Leu Gln Pro Gln Lys Ile Asn Ser Glu Asn Ala Asp Ala Leu Ala
 3368 1220 1225 1230
 3370 Gln Leu Leu Thr Leu Ala Arg Itp Ile Gln Thr Val Leu Ala Arg Ile
 3371 1235 1240 1245
 3373 Ser Gly Tyr Asn Ile Arg His Ala Lys Gly Glu Asn Pro Ile Pro Ile
 3374 1250 1255 1260
 3376 Phe Phe Asn Gln Gly Met Gly Asp Ser Thr Leu Glu Phe His Ser Ile
 3377 1265 1270 1275 1280
 3379 Leu Ser Phe Gly Val Gln Ser Ser Ile Lys Tyr Ser Asn Ser Ile Lys
 3380 1285 1290 1295
 3382 Glu Met Val Ile Leu Phe Ala Thr Thr Ile Tyr Arg Ile Gly Leu Lys
 3383 1300 1305 1310
 3385 Val Pro Pro Asp Glu Arg Asp Pro Arg Val Pro Met Leu Thr Trp Ser
 3386 1315 1320 1325
 3388 Thr Cys Ala Phe Thr Ile Gln Ala Ile Glu Asn Leu Leu Gly Asp Glu
 3389 1330 1335 1340
 3391 Gly Lys Pro Leu Phe Gly Ala Leu Gln Asn Arg Gln His Asn Gly Leu
 3392 1345 1350 1355 1360
 3394 Lys Ala Leu Met Gln Phe Ala Val Ala Gln Arg Ile Thr Cys Pro Gln
 3395 1365 1370 1375
 3397 Val Leu Ile Gln Lys His Leu Val Arg Leu Leu Ser Val Val Leu Pro
 3398 1380 1385 1390
 3400 Asn Ile Lys Ser Gln Asp Thr Pro Cys Leu Leu Ser Ile Asp Leu Phe
 3401 1395 1400 1405
 3403 His Val Leu Val Gln Ala Val Leu Ala Phe Pro Ser Leu Tyr Trp Asp
 3404 1410 1415 1420
 3406 Asp Pro Val Asp Leu Gln Pro Ser Ser Val Ser Ser Ser Tyr Asn His
 3407 1425 1430 1435 1440
 3409 Leu Tyr Leu Phe His Leu Ile Thr Met Ala His Met Leu Gln Ile Leu
 3410 1445 1450 1455
 3412 Leu Thr Val Asp Thr Gly Leu Pro Leu Ala Gln Val Gln Glu Asp Ser
 3413 1460 1465 1470
 3415 Glu Glu Ala His Ser Ala Ser Ser Phe Phe Ala Glu Ile Ser Gln Tyr
 3416 1475 1480 1485

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/724,126

DATE: 12/07/2000

TIME: 07:57:14

Input Set : A:\35966aseq.txt

Output Set: N:\CRF3\12072000\1724126.raw

3418 Thr Ser Gly Ser Ile Cys Asp Ile Pro Glv Itp Tyr Leu Itp Val
 3419 1490 1498 1500
 3421 Ser Leu Lys Asn Gly Ile Thr Pro Tyr Leu Ala Cys Ala Ala Leu Phe
 3422 1505 1510 1515 1520
 3424 Phe His Itp Leu Leu Cys Val Thr Pro Pro Glu Gln Leu His Itp Asn
 3425 1525 1530 1535
 3427 Ser Ala Gln Gln Gln Ser Ala Leu Cys Ser Itp Leu Ser Leu Pro
 3428 1540 1545 1550
 3429 Thr Asn Leu Phe Leu Leu Itp Gln Glu Itp Itp Asp Thr Val Ala Pro
 3431 1555 1560 1565
 3432 Leu Leu Gln Arg Arg Cys Ala Asp Pro Ala Leu Leu Asn Cys Leu Lys
 3434 1570 1575 1580
 3436 Gln Lys Asn Itp Val Val Ala Itp Pro Arg Lys Arg Asn Ser Leu Ile
 3437 1585 1590 1595 1600
 3439 Gln Leu Pro Asp Asp Itp Ser Cys Leu Leu Asn Gln Ala Ser His Phe
 3440 1605 1610 1615
 3442 Arg Cys Pro Arg Ser Ala Asp Asp Glu Arg Lys His Pro Val Leu Cys
 3443 1620 1625 1630
 3445 Ile Phe Cys Gly Ala Ile Leu Cys Ser Gln Asn Ile Cys Cys Gln Gln
 3446 1635 1640 1645
 3448 Ile Val Asn Gly Glu Glu Val Gly Ala Cys Ile Phe His Ala Leu His
 3449 1650 1655 1660
 3451 Cys Lys Ala Arg Gly Cys Ala Tyr Pro Ala Pro Tyr Leu Asp Glu Itp
 3452 1665 1670 1675 1680
 3454 Giv Gln Thr Asp Pro Glv Itp Lys Arg Gly Asn Pro Leu His Leu Ser
 3455 1685 1690 1695
 3457 Arg Glu Arg Itp Arg Lys Leu His Leu Val Trp Gln Gln His Cys Ile
 3458 1700 1705 1710
 3459 Ile Glu Glu Ile Ala Arg Ser Gln Glu Thr Asn Gln Met Leu Phe Gly
 3461 1715 1720 1725
 E--> 3463 Phe Asn Trp Gln Leu Leu*
 E--> 3464 1730 1735

delete

do not count ending stop codon

see next page for more error

VERIFICATION SUMMARY
PATENT APPLICATION: US/09/724,126

DATE: 12/07/2006

TIME: 07:50:18

Input Set: A:\35966aseq.txt
Output Set: N:\CRF3\12072000\1724126.raw

Line 4276 C: Current Application Number differs, Replaced Application Number
Line 4277 C: Current Filing Date differs, Replaced Current Filing Date
Line 4278 M:250 L: (12) Invalid/Missing Amino Acid Numbering, SEQ ID:2
Line 4279 Repeated in SeqNo:2
Line 4280 M:251 L: (12) Invalid/Missing Amino Acid Numbering, SEQ ID:4
Line 4281 Repeated in SeqNo:4
Line 4282 M:252 L: (12) Invalid/Missing Amino Acid Numbering, SEQ ID:6
Line 4283 Repeated in SeqNo:6
Line 4284 M:253 W: Validator feature missing, <220> not found for SEQ ID:18
Line 4285 M:254 W: Mandatory feature missing, <211> not found for SEQ ID:18
Line 4286 M:255 W: Mandatory feature missing, <223> not found for SEQ ID:18
Line 4287 M:256 W: (16) "P" or "Xaa" used: Feature required, for SEQ ID:18
Line 4288 M:257 W: (16) "P" or "Xaa" used: Feature required, for SEQ ID:18
Line 4289 M:258 L: (12) Invalid Stop Code On Error, STOP CODON:*

09/724/26

20

<210> 18
<211> 5205
<212> DNA
<213> Homo sapiens

<400> 18
atggcggacg aggaggctgg aggtactgag aggatggaaa tcagcgcgga gttacccca 60
acccctcagc gtctggcatc ttgggtggat cagcaagttt attttatac tgctttctt 120
catcatttgg cacaatttggt gccagaaatt tactttgctg aaatggaccc agacttggaa 180
aagcaggagg aaagtgtaca aatgtcaata ttcactccac tggaaatggta cttatttgg 240
gaagatccag atatttgc tt agagaaattt aagcacagtg gagcattca gctttgtggg 300
agggtttca aaagtggaga gacaacctat tcttcaggg attgtcaat tgatccaaca 360
tgtgtactct gtatggactg cttccaggac agtgttcata aaaatcatcg ttacaagatg 420
catacttcta ctggaggagg gttctgtgac tggagaca cagaggcatg gaaaactggc 480
ccttttgg taaatcatga acctggaaaga gcaggtacta taaaagagaa ttcacgctgt 540
ccgttgaatg aagaggtaat tgtccaagcc aggaaaatat ttccttcagt gataaaaatat 600
gtcgtagaaa tgactatatg ggaagagggaa aaagaactgc ctcctgaact ccagataagg 660
knryycvndh hsydhgtcat atacagccta caaagagctc ttgactgtga gctcgcagag 720
gcccagttgc ataccactgc cattgacaaa gagggtcgtc gggctgttaa agcgggagct 780

(only the enriched portion
of Seg. 18 shown)

See item 10
in
Ever
funny sheet